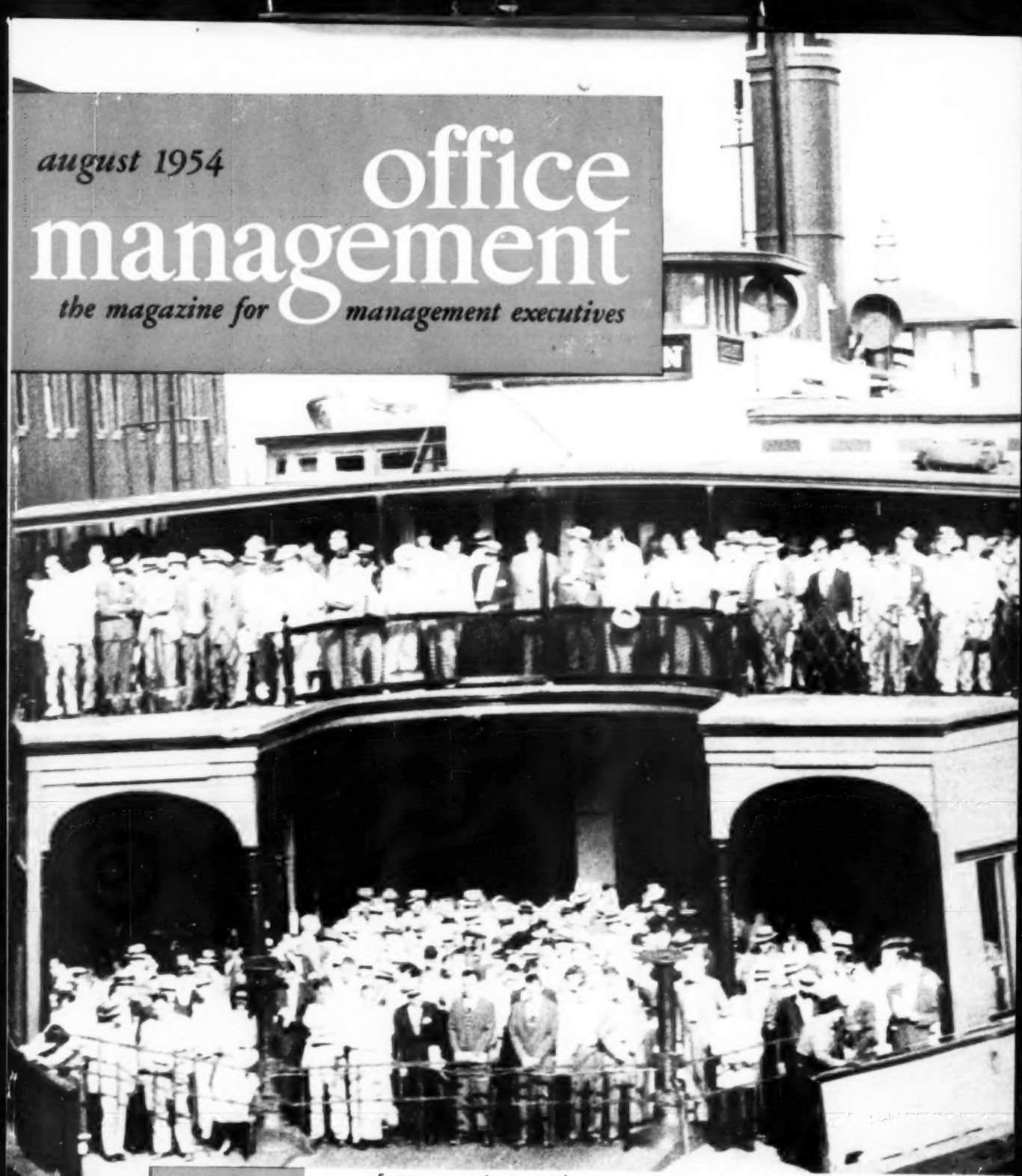
august 1954

office management

the magazine for management executives



Summer morning—on the way to New York's offices (see page 5)

featuring

- Sampling simplifies job analysis — *new technique outlined*
- Offices must share in tool development — *and budget for it*
- Supervision can be democratic — *the middle way to best*

WHEREVER YOU ARE...THERE'S AN ASE DEALER NEAR YOU!

STEEL OFFICE FURNITURE

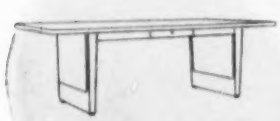
LOOKS BETTER...LASTS LONGER...LOWERS COSTS

Visit your ASE dealer and take a critical look. Convince yourself that there's more real dollar-for-dollar value in ASE office furniture. You'll find countless product advantages exclusive with this complete high-quality line of desks, chairs, files and office equipment.

ASE

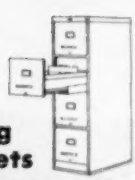
BETTER BUILT FOR BETTER BUSINESS

desks



tables

chairs



filing cabinets

blueprint files

wardrobe cabinets

Write for catalog and name of nearest dealer.

ALL-STEEL EQUIPMENT INC. Aurora, Illinois

INQUIRY

ACTION

SALE!

Long Distance doesn't cost... it pays

Following up inquiries by Long Distance saves time, gets you there ahead of competition. Telephone contacts have many of the qualities of personal contacts, plus speed. Often you make immediate sales.

Whether selling or buying or getting the facts, you'll find that the planned use of Long Distance pays for itself—many times over.

We have some specific suggestions for the profitable use of Long Distance in Sales, Purchasing, Administration, Traffic, Production, Engineering and Accounting. A call to your Bell Telephone Business Office will bring a representative to discuss them with you.

LONG DISTANCE RATES ARE LOW

Here are some examples:

New York to Philadelphia	**50¢**
Cleveland to Indianapolis	**90¢**
Chicago to Pittsburgh	**$1.15**
Boston to Detroit	**$1.40**
Washington to San Francisco	**$2.50**

These are the *daytime* Station-to-Station rates for the first three minutes. They do not include the federal excise tax. Long Distance rates are even lower after 6 o'clock every night and all day Sunday.

Call by Number. It's faster.

BELL TELEPHONE SYSTEM

MACEY FOWLER

TEmpleton 8-5900 **NEW YORK:** 305 EAST 63rd STREET **BOSTON:** 150 CAUSEWAY STREET • Richmond 2-1800

An integrated system of furnishing elements for fine business interiors.

office management

Office Methods, Equipment, Personnel, and Purchasing
Sponsor of the "Office of the Year" Awards

august, 1954

Volume XV No. 8

IT CAN be very pleasant going to work in the office on a summer morning in New York, most especially if you live in New Jersey or Staten Island and cross the mighty Bay or the Hudson on the breezy front of a ferryboat!

Our cover picture shows the good ship Binghamton of the Delaware, Lackawanna & Western Railroad, wearing its own white collar of cool foam, bringing one of its many morning loads of white-collar people into the ferry slip at Barclay Street, New York, fresh and alert for another day of office work!

in this issue

Influence for unity (*Editorial*) 11

Sampling simplifies job analysis 12
by Richard H. Goldberg

Supervision can be democratic 15
by Eugene E. Jennings

Stauffer offices maintain the luxury tradition 18

Office itself must share in tool development 22
by R. L. Harrell

Case of the month 24

Practical values of records management (*Part I*) 27
by Paul Denoncourt

What to do? 29

Tools of the office series 37
This month: *adding and calculating machines, dictating and transcribing equipment*

M. A. Geyer, President; Donald McAllister, Vice-President and General Manager; Thomas V. Murphy, Editor; Hugh Ward, Advertising Director; John M. Smythe, Midwest Manager; Robert M. Smith, Managing Editor; Robert Beeman, Walter A. Kleinschrod, Alvin M. Hattal, Marguerite Polyniak, Robert G. Black, George A. Tice, Associate Editors.

Advertising Staff: James E. Neary, Jr., Advertising and Business Manager; Fred Steinhilber, Charles B. Rosengren. *Circulation:* M. T. Weeks, Manager. *Production Department:* James V. Quirk, Manager; Milton Sharon, Assistant Manager. *Art Director:* Joseph Hochfeld.

Member of
Audit Bureau of Circulations

Member of
Associated Business Publications

Published monthly by **GEYER PUBLICATIONS**

Andrew Geyer, Inc., *Publishers since 1877*

212 Fifth Ave., New York 10, MUrray Hill 9-4411

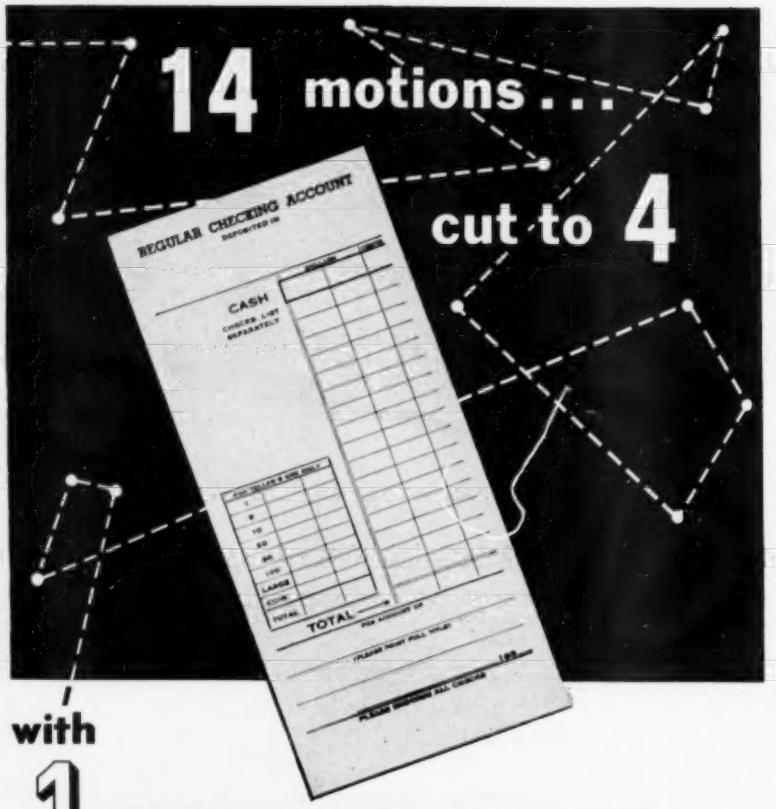
branch offices

Boston 10, 212 Summer St., Room 600, (Hancock 6-5390), Charles G. Kretschmar; *Chicago 1*, 228 North La Salle St. (State 2-2911), John M. Smythe, William Murray, Richard P. McClanahan; *Los Angeles 5*, 3257 W. 6th St. (Dunkirk 7-6149), Chris Dunkle & Associates; *Editorial Representative:* J. Richard Iander; *San Francisco 5*, 681 Market St. (Douglas 2-2597), Alexander Rattray; *Dallas 4*, 2909 Maple Ave. (Randolph 3833), Joe Sanders.

Subscription: $2 a year in United States and in possessions, Canada, Central and South America. Other countries $4 a year. Single copies 25c. Copyright 1954 by Andrew Geyer, Inc.; all rights reserved. Also publisher of *Geyer's Topics*, *Who Makes It and Where*, *The Gift and Art Buyer*, and *Sports Age*.

Please give 60 days' notification of any change of your address.

Reentered as second class matter June 29, 1953, at the Post Office at New York, N. Y., under Act of March 3, 1879.



with

1 Baltimore Business Form

Until a few years ago, most banking institutions used deposit systems that involved many separate operations—in some cases up to 14 distinct steps. Since then, bank after bank has turned to us to help speed up this time-consuming operation. Today, by adopting forms designed by Baltimore Business Forms experts, 4 motions take the place of the previous 14. Time and money is saved. Business is expedited.

WHAT'S YOUR PROBLEM? Leading department and retail stores, wholesalers, delivery services, manufacturers, banks . . . all have found that Baltimore Business Forms save time, trouble and money.

Why? Because Baltimore Business Forms are *designed* to fill specific business requirements.

Since 1916, Baltimore Business Form's design and manufacturing experts have solved countless problems in serving over 60,000 of the nation's leading business houses. Their wealth of experience ideally qualifies them to help you. Remember, often a single suggestion may save hundreds . . . even thousands . . . of dollars for your company. So, re-evaluate your present system in the light of today's constantly changing conditions. Call in Baltimore for help in solving your business forms problems.

BALTIMORE BUSINESS FORMS

Saving time and reducing costs in business and industry

The Baltimore Salesbook Company

The Baltimore Salesbook Company, 3134 Frederick Avenue, Baltimore 29, Maryland

We are interested in seeing samples of Baltimore Business Forms.

Name .....

Company .....

Type of Business .....

Address .....

City ..... State .....

Group insurance now offered to as few as ten workers

Group-type insurance is now offered to groups of as few as ten employees under a program recently introduced by The Mutual Life Insurance Co. of New York, 1740 Broadway, New York. This is a new development of the "Module" insurance plan announced by the company a year ago, by which "package" plans of insurance coverage became available to small companies which had previously been unable to afford group insurance.

The module plan consists of basic components of insurance which can be combined in various forms to suit the special needs of a company. The basic module is life insurance, including double indemnity in case of accidental death from non-occupational causes. Benefits are payable either as a lump sum or in installments.

Other modules can be added as desired. These include disability income, hospital and surgical benefits for employees and their families, extra life insurance for married male employees, and pensions for widows.

The company added the following comments: "A unique feature of the plan is its later convertibility to a retirement plan by fitting in a pension module. The latter can be added at a level annual cost, despite increase in age among the employees.

"Under the pension module, the amount of retirement income depends on the choice of the buyer and is related to salaries of employees. Retirement income can be integrated with Social Security payments."

MONY refers to this program as its "Module Multiprotection Plan."

The company also announced that Richard J. Learson has been appointed vice president for Module operations. Mr. Learson had been vice president for office operations, in which post he is succeeded by Vincent F. Lechner. At the same time, E. C. Danford was promoted to the post of manager of Module sales, becoming also a senior officer of the company, and Richard B. Thompson has been named director of Module sales.

Workers go back to school to improve penmanship

The idea that practice makes perfect certainly does not appear to apply to the subject of penmanship; the average person's handwriting seems to get worse the more he uses it. Perhaps the

Smartly styled line of 45 models, with many new features, provides the correct metal desk for every office job

IN TUNE with today's office needs, GF introduces the Generalaire. This new metal desk has many new features developed from long-time, thorough study of the needs of both large and small offices. It combines unusual beauty and smart styling with maximum functional value, flexibility and durability.

Among the new features are a unique center drawer locking arrangement, nylon glide channel suspensions, graceful bi-metal pedestal struts with non-skid shoes which provide either 29" or 30½" desk height, and complete interchangeability of parts.

Also incorporated are such proven GF features as the smooth, long-wearing Velvoleum writing top, the 30" depth, the full-bodied gray gloss enamel finish and anodized aluminum trim, pedestal units completely sound-deadened and ready for concealed wiring, and completely flexible drawer arrangements.

Appearance is such that the Generalaire can be used harmoniously in large offices with existing installations. Forty-five models, all quickly assembled from standard parts, provide a range of types wide enough to meet any and every office job need.

Generalaire is ready! See it in the GF dealer's showroom. For an illustrated folder, write The General Fireproofing Company, Department O-33, Youngstown 1, Ohio.

GF

GENERAL FIREPROOFING

Foremost in Metal Business Furniture

MODE-MAKER DESKS • GOODFORM ALUMINUM CHAIRS • SUPER-FILER MECHANIZED FILING EQUIPMENT • GF ADJUSTABLE STEEL SHELVING

Good metal business furniture is a good investment

old maxim should be restated: good, careful practice makes perfect — bad practice makes imperfect.

The problem of bad penmanship was taken up for study at the Philadelphia plant of the Minneapolis-Honeywell Regulator Co. and it was decided that the matter was so important that it was worth while to send the company's clerical and supervisory employees to school on company time to relearn the supposedly simple skill of handwriting.

The company has set up penmanship tutoring classes on a twelve-week schedule, with half-hour sessions once a week. Emphasis is being put on number formation, since errors in the writing of numbers can be especially costly.

The program is being conducted by C. L. Scheetz, training director of the Industrial Division. Mr. Scheetz points out that in spite of the current excitement over mechanization in the office, the common pen or pencil is still the primary instrument for recording the basic information required in business operations. Much of this information must be handwritten before it can be fed into punched card or other mechanized systems; and, Mr. Scheetz added, most of the mistakes made at this level are errors in copying or reading.

Poor number formation often results in misreading 5's, 3's, and 8's, and in confusing 1's and 7's. The Minneapolis Honeywell training program, therefore, is designed to make employees more aware of the special characteristics of each numeral, as a means of improving both the writing and reading of figures.

College scholarship given by NOMA chapter

Believing that it is important to the country that young men and women entering the business world should be adequately prepared by qualified teachers, the Wilmington, Del., chapter of the National Office Management Association, has established a $400 college level tuition scholarship to aid in the training of business teachers.

The chapter has announced that Miss Lina Ann McGee, a senior at the Georgetown, Del., High School, has received this year's award. Miss McGee indicated she will enter Madison College, Harrison, Va., in September.

This Business Teacher Training College Scholarship covers tuition up to $400 a year, which is paid directly to the college, plus an allowance of $37.50 a semester for books, laboratory fees, and similar charges, paid to the student. The scholarship is awarded for a two-semester period and is renewed for a total of eight semesters if the student's work is satisfactory to the college authorities.

Candidates are required to be American citizens, graduates in the upper fifth of their class from a secondary school, or equivalent, and unable to attend college without assistance.

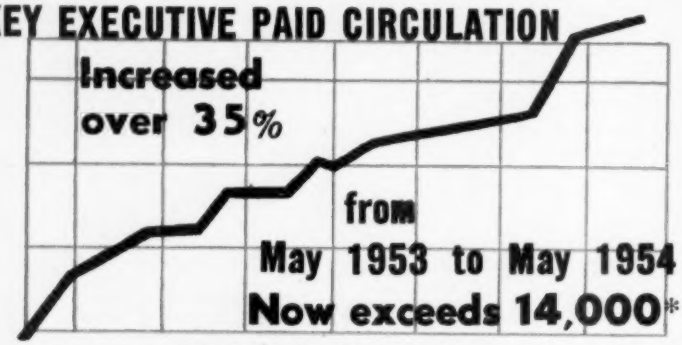
New envelope firm opens

A new company, Plymouth Envelope, Inc., has opened its plant and offices at 43 W. 61st St., New York, according to an announcement from its president, Henry J. Hemmens, Jr. The new company will make a complete line of standard envelopes, and will also produce a run of specialty envelopes of different sizes and shapes. In addition, Plymouth will maintain its own art service.

Mr. Hemmens was formerly president of Berlin & Jones Co., Inc. His vice president, Andrew J. Piegare, was plant superintendent for Berlin & Jones for 15 years. Martin W. Liquori, secretary of the new company, was formerly assistant plant superintendent for Berlin & Jones.

OFFICE MANAGEMENT'S

KEY EXECUTIVE PAID CIRCULATION



Witness This Steady Growth In Paid Circulation

(According to A.B.C. Report)

1952
September .. 8,565
December 9,427

1953
March 9,604
May 10,211
June 10,506
September 11,027
December 12,185

and continuing into 1954 . . .

*March 13,005
*May 14,053

* Subject to A. B. C. audit for 1st 6 months of 1954.

Specialized office systems and equipment features attract top executive *PAID* subscribers

In steadily increasing numbers, more and more office management executives have been discovering OFFICE MANAGEMENT as their indispensable source of vital management information on office systems, services, supplies and equipment. That's why management executives pay subscription fees to OFFICE MANAGEMENT—the only A.B.C. audited voluntarily *paid* publication edited exclusively for executives concerned with office operations and efficiency.

MANUFACTURERS

OFFICE MANAGEMENT'S executive readers welcome your advertisements. They are alert to new procedures, and new ideas, to solve equipment and supplies problems. Your advertisement gets real penetration thru this active readership. Reach these key executives with real purchasing authority—start your schedule next month.

CLOSING DATES: Set copy, 1st of preceding month
Complete plates, 5th of preceding month.

OFFICE MANAGEMENT

The Magazine for Management Executives

212 Fifth Avenue New York 10, N. Y.

Published by Geyer Publications, Established 1877. Offering the most complete publishing service in the office equipment and stationery field.

NYU's Machine Accounting Division expands program

New York University's Machine Accounting Division has added a new course, which will be given for the first time during the coming fall term. It is entitled "Modern Machine Accounting Applications," and will include discussions of punched card, duplicating, and other machine systems.

The Machine Accounting Division, which is a recent addition to the Management Institute's Systems and Procedures Program at NYU, will continue its courses in "Planning and Managing Punched Card Systems and Procedures" and "Application of Electronics to Office Systems and Procedures."

The instructor for these courses is Eugene F. Murphy, who, in addition to his university duties, is punched card equipment instructor of the personnel division, Metropolitan Life Insurance Co., New York.

Other features of the program include field trips to a computer factory and to a manufacturer of continuous forms, and demonstrations of large scale computers and of newly developed punched card devices. Students will also attend seminars which are to be addressed by guest lecturers.

The development of college level courses in the machine accounting field has been backed by the National Machine Accountants Association, which recently reported that there are 70 courses related to punched cards and electronic tape handling techniques now being taught in 36 colleges and universities throughout the country.

Further information on the NYU program can be obtained from D. S. Phillips, Director, Management Institute, New York University, Washington Square, New York.

SPA announces program for systems meeting

Practical work measurement, the importance of systems and electronics in business today, and an approach to the automatic office will be the three main subjects discussed at the International Systems Meeting to be held at New York's Hotel Commodore, October 25-27, under the sponsorship of The Systems and Procedures Association of America, Hotel Commodore, New York.

An announcement from SPA lists the following five questions as typical of

(*To page 60*)

YOU TELL US...

then we'll *TELL YOU!*

This OFFICE-ette set up in minutes by one man — and a screw-driver.

When it comes to planning your office, you're the one who knows who should sit where and how the space should be divided — but we're the ones who can provide the easiest, most economical and speediest way to get all the separate offices you need.

Free-Standing Arnot

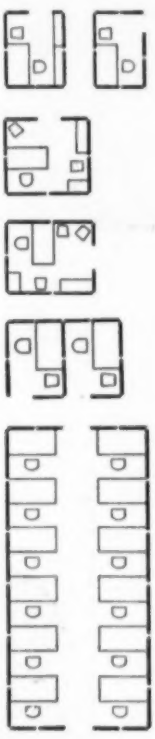
PARTITIONettes† and OFFICE-ettes*

are the answer — office walls that are erected in minutes without any special labor... and with but one tool: a screw-driver, plus integrated modular desk units.

Once your office furniture dealer shows you how easy it is to divide office space the OFFICE-ette way, you'll immediately start planning for *more* space divisions, *more* separate rooms — rooms for *all* those in the office who need them, enclosures you've wanted a long time but hesitated to order because of high labor costs, painting and plaster mess and other installation headaches.

We don't have to tell you how important it is not to stint on partitioning — because of the part that separate enclosures can play in improving office comfort and efficiency! You just tell us what your office space division problems are and we'll show you how to solve them with the most ingenious, most versatile, best-designed modular office partitioning system on the market today!

†T. M. Reg., Pat. Pending. In steel or wood, with or without bandfrost or clear glass.
*Licensed under DuPont Patent. In steel or wood.

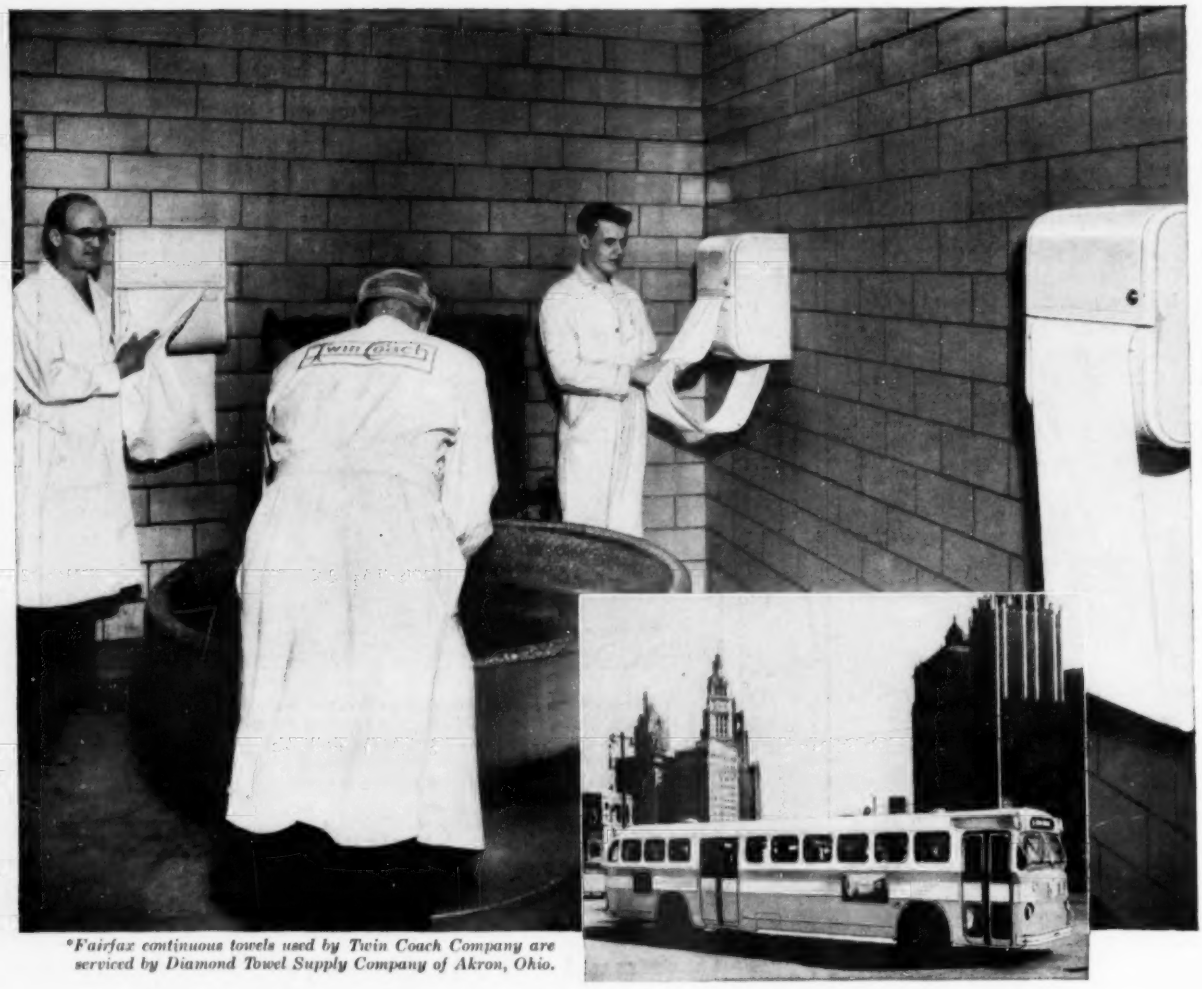


OFFICE-ette dealers *are trained by Arnot-Jamestown in the technique of office space division the Arnot way. Ask your office furniture dealer, or write*

Arnot

ARNOT-JAMESTOWN DIVISION
AETNA STEEL PRODUCTS CORPORATION
Jamestown, New York

PRODUCERS OF: The new Arnot Partition-ettes; Arnot Functional Office Furniture; Hospital and Laboratory Equipment; Under Counter Bank Equipment; Aetna Steel Doors and Frames; Ader Bearings; Doyle Metal Office Partitions (Astrowall)



*Fairfax continuous towels used by Twin Coach Company are serviced by Diamond Towel Supply Company of Akron, Ohio.

Twin Coach Installed Cotton Towels* to Eliminate Fire Hazard and Keep Washrooms Tidier

Here's How Linen Supply Works...

You buy nothing . . . your linen supply dealer supplies everything. The low cost includes cabinets, pick-up and delivery, provides automatic supply of freshly laundered towels and uniforms. Quantities can be increased or decreased on short notice. Local service is listed in your classified book under SERVILINEN, LINEN SUPPLY or TOWEL SUPPLY.

• The Twin Coach Company, Incorporated of Kent, Ohio, is the world's largest builder of city buses powered by propane gas. This company supplies buses to transit companies throughout the world. Pictured above is one of their latest models built for the Chicago Transit Authority. The company is currently celebrating its 25th Anniversary. Management changed over to cotton towels to eliminate fire hazard . . . tidier washrooms were the end result at lower cost to the company. Twin Coach employees are happier, too, with the greater comfort of soft, absorbent cotton towels.

Whatever your towel problem . . . whether you operate a factory, institution, office or store . . . you can be sure that soft, gentle, absorbent cotton towels will do the best job in promoting employee morale, building customer good will, increasing tidiness in your washrooms and cleanliness among your employees. Cotton towel service is economical, it's efficient and it's a sign of good management.

Clean Cotton Towels...

Sure Sign of Good Management

Fairfax·Towels

A PRODUCT OF WEST POINT MANUFACTURING CO. • WELLINGTON SEARS CO., SELLING AGENTS, 65 WORTH ST., NEW YORK 13

editorial

Arabian American Oil Co. clerks, with aid of giant visible index, sort mail for employees of 20 different nationalities at company's mail center at Dhahran, Saudi Arabia.

Influence for unity

IN THE DAYS of international tension in which we have to live, there is a constant casting about for prescriptions and formulas which will help to make people everywhere realize that human needs and interests are essentially the same the world over. In the cause of unity and therefore of peace, similarities rather than differences must be emphasized.

Never referred to in the eloquent words poured out for many years now on this subject in our own and friendly countries is the powerful unifying force of American office efficiency.

It is in the highest degree fortunate for the cause we support that the American office has come to be a symbol the world over of leadership in solving the needs and problems of office work. In the space of a half-century, American office methods have been winning high international reputation for excellence. In their impressive demonstration of value in contributing to our own great advance as a nation and in what they have done in aiding other nations to meet the growing problems of an industrial age, they have been powerful propaganda for our way of living and doing.

This reputation cannot fail to be of special consequence now with respect to those countries merging into the industrial age, in the Near East and elsewhere, whose friendliness and cooperation democracy must have in its competition with communism. Freedom needs friends—and a very good way of making friends on a big scale among people suddenly confronted with the varied complexities of modern office work is to give them the benefit of our own hard-won knowledge and experience on the handling of these problems.

The American influence on office work in other lands is of vital significance to us all.

Sampling simplifies job analysis

by Richard H. Goldberg

Supervisor, Management Survey Department, Aronson & Oresman, New York

HOW DO you break down the time of a worker who does a great many different jobs? How much of his time is spent on each of his tasks? For example, take the case of a clerk who handles orders for three kinds of merchandise. How much of the cost of his salary goes into handling each kind of merchandise? How well can you break down the cost of your stockroom labor? Your shipping labor?

Such a breakdown is difficult. Until now, the only way to answer such questions has been to make a record of every minute of each worker's time. Some firms give the worker a card for every task he does. The worker uses a recording clock with which to punch the time "in" and the time "out" on the card whenever he switches to another job. In other cases, a time study man follows the worker around like his shadow, doggedly writing down every move the worker makes (while the worker makes caustic comments about the ways in which the company wastes money).

When a record has been made, the real work begins. An army of clerks falls upon the record and spends endless hours making computations, adding figures, punching cards or running tabulating equipment.

Time-eating labor? True enough. The alternative is to ignore costs which can't be broken down easily or to use guesswork in allocating them. Then decisions which are important for profits have to be left to guesswork.

All of this has changed. A new technique called Work Sampling makes analysis of what people do with their time a simple matter. Work Sampling is an application of statistical sampling. It is based on the idea that if you take enough brief looks at what people are doing, a few times a day, you will have a good cross-section of how they spend all their time. The nice part of Work Sampling is that it is simple and non-mathematical. Anyone can learn to use it quickly and can get good results with it. No outside experts or training courses are needed. Whoever uses Work Sampling can record his observations easily, do his own clerical work and get results quickly.

The ground has already been broken for Work Sampling. A department store has applied it with startling success to find out how much of its floor supervisors' time was spent in actual supervision. (Too little time). A hospital used it to find out how much of the nurses' time went for non-nursing duties. (Too much time). Industry has used it to find out how well the time of critically scarce engineers is utilized. Sooner or later, some top executive will use Work Sampling to study the effectiveness of his executives. (At this point, some of us will undoubtedly find life much less comfortable!)

We have put Work Sampling to use and found that it did everything claimed for it. A company we know of had the same old problem. It wanted to know how profitable a number of different products and a number of different types of customers were. One factor was the cost of clerical, order picking and shipping labor. The company wanted to know how much of this cost went for each product and type of customer. Unfortunately, the clerical and shipping people worked on whatever orders came along. They did not specialize on any particular products or customer types. Everybody simply pitched in when orders came along. There were no records which would show the cost of these people's time broken down by product and customer.

We tried Work Sampling on this problem and solved it quickly. One of the company's own executives acted as the observer. He needed only a few simple instructions. (He had

DAILY OBSERVATION SHEET

DATE: APRIL 14, 1954

DEPARTMENT: STOCKROOM

EMPLOYEE	PRODUCT				CUSTOMER				TOTAL
	PRODUCT A	PRODUCT B	PRODUCT C	NOT ALLOCABLE	MANUFACTURER	RETAILER	JOBBER	NOT ALLOCABLE	
JONES	XXX	X	X	XX	X	XX	XX	XX	7
SMITH	X	XXXX	XX		XX	XXX	X	X	7
ROBINSON	XX	X	XXX	X	XXXX	X	XX		7
JOHNSON	X	XXX	XX	X	X	XX	XXXX		7
ADAMS	XXXXX		XX		XXXXXXX				7
BAKER	X	XXXXXX			XX	XX	XX	X	7
TOTAL FOR DAY	13	15	10	4	17	10	11	4	42
TOTAL PREVIOUS DAYS	57	86	41	17	75	63	47	16	201
TOTAL TO DATE	70	101	51	21	92	73	58	20	243
PERCENTAGE TO DATE	28.8%	41.6%	21.0%	8.6%	37.2%	30.0%	23.9%	8.2%	100.00%

Figure 1

Melvin E. Rubenstein, assistant controller, Max Mandel Laces, Inc., New York, checks work done by Mrs. Mary Siciliano, in sampling procedure carried out by his company

little formal training in statistics.) His observations consisted of making six to eight trips at random times each day through the order, shipping and billing departments, making a check mark on a sheet as he passed each worker and saw what he was doing. Each trip took only fifteen minutes to observe the work of two dozen workers. The executive still got his regular work done. No clerks were needed. At the end of only thirteen working days, the company had accurate figures showing where the time was spent.

Work Sampling is second cousin to statistical quality control. In statistical quality control, a certain percentage of apples is drawn out of the barrel. If not too many of the samples are rotten, the whole barrel is OK'd and sent to the customer.

Work Sampling is a little different. Instead of apples, the samples are observations. Someone looks in to see what someone else is doing a few times a day and classifies what he sees. As time goes on and a record of the observation builds up, the observer computes the percentages of time he has seen each type of work being done. When enough observations have been made, the observer concludes that if he could observe all the work done, the same percentages would hold true.

There are two ways to decide how many observations are enough:

1. If there is a deadline for getting the facts, statistical formulas or tables must be used. These will show how many observations are necessary each day for the number of days which are available. (See "Factory Management" for July 1952 and March 1954 for formulas and tables).

2. If there is no fixed time for a report, formulas and tables are unnecessary. The person making the study can watch the results of each day's observations to see when they begin to be consistent from day to day. When this happens, enough observations have been made.

There will never be any consistency in the percentage results for any individual day. However, consistency will appear in cumulative percentages when there are enough observations. Cumulative percentages are simply the results for each day's study added to the results for all previous days' studies. Using cumulative percentages levels out individual days' fluctuations and shows the consistent pattern in how people's time is used.

The method of computing cumulative percentages is very simple. The observer classifies each observation of a worker's work into one of several groups. At the end of the first day studied, the observer adds up the number of observations he has put in each group. He then computes the percentage of all observations which have fallen into each group. At the end of the second day studied, he adds up the observations in each group for that day. He adds the totals for that day to the totals for the corresponding groups of the previous day. This gives him cumulative totals in each group. He then figures out the cumulative percentages of all observations which have fallen into each group. He does the same thing at the end of each successive day which he studies. The

cumulative percentages are sometimes plotted on a graph so that any leveling-off can be seen easily.

There is nothing else to Work Sampling. It is based on statistical theory but it is so simple to use that anyone can apply it.

The company which made the study took one preliminary step which is easy to overlook. It held a meeting to explain Work Sampling to all of the supervisors and workers who would be affected by it. This was a vitally important step. The company needed these people's cooperation. They had to understand just what the executive who acted as observer was doing when he came around and watched them. If nobody had told them what was going on, and the observer had just made his marks on a piece of paper and gone away without saying anything, they would have supposed that he was checking up on each one personally. They would have reacted by watching for the observer and doing anything at all to look busy when he came to them. This would have defeated the purpose of the study: to get a cross-section of everything they did.

At the meeting, it was carefully explained to the people affected that the observer was not out to check up on how each individual did his work. All he would be looking for would be the products and customers on which the departments as a whole spent their time.

With the workers prepared, the next step was to decide how to classify the observations. The company wanted to know how much of certain departments' working time was spent on each of three products and on each of three types of customers. This meant that each observation would have to be classified twice, once by product, once by customer type.

There was another problem in classifying observations. The worker might be away from his post. It might not be possible to classify what the worker was doing. The order might call for more than one product. The worker might be doing work which was not involved with handling an order at all. A clerk might be talking over the telephone about the progress of an order. In a case like this, the observer might make a special trip to come back later and find our just what the clerk had been doing, but this would make the study a much longer job. The most practical way to handle all of these problems seemed to be to lump them all in one classification, Not-Allocable. If an observation could be classified by product, but not by customer, or vice versa, it would be classified in one way but thrown into Not-Allocable for the other. No effort was made to go back and re-study observations which were classified as Not-Allocable.

Following daily checks, cumulative percentages are computed and plotted on a graph by Mr. Rubenstein

Another question to be answered was how to make the observation of the worker's work. The worker might be just about to start another job at the time when the observer reached him. Should the observer wait until the worker started the new job and classify this? Should he classify the job being done at the exact time when he reached the worker? The better approach seemed to be to classify the job being done at the exact time when the observer reached the worker, not to wait. This would give a truer cross-section of all the work being done.

Then there was the question of how the observer would know just what work the employee was doing. The best answer seemed to be to have the observer pick up the order which was being worked on. This would show him at a glance who the customer was and the product ordered.

Some attention was required to the type of record which the observer would keep. The best form seemed to be a Daily Observation Sheet for each department. (Figure 1, Page 12.) It had a column for each classification of work. It had a separate line for each worker showing his name. Each observation was classified by making check marks in the proper columns opposite the employee's name. The column headings on each Daily Observation Sheet were like this:

Product	*Customer*
Product A	Manufacturer
Product B	Jobber
Product C	Retailer
Not-Allocable to Product	Not-Allocable to Customer

It was necessary to decide on the number of tours through the departments to be made by the observer each day. Six to eight tours a day seemed to be a practical number in view of the observer's regular work. Each tour took about 15 minutes. More tours in a day would have been necessary if orders for a particular product or from a particular type of customer had been handled infrequently. A good sample of the work on such orders could only have been taken by making more observations.

The observer also had to be given some midnight oil to burn. Some departments were working overtime. Orders from one type of customers which did not have a high priority were held aside and worked on at night. Observations had to be made during overtime hours with the same frequency as during regular working hours.

The time of day when each tour was made had to be chosen at random each time. The workers were visited in a different order on each tour. These steps were a "must" for an accurate sample.

Tabulating the results was very simple. At the end of the day, the observer added up the check marks in each column on his Daily Observation Sheets and computed cumulative percentages. He plotted the cumulative percentages on a graph. When the graph showed that the cumulative percentages of time spent on each type of work were leveling out, he knew that he had made enough observations to rely on the results.

The amount of time and effort required to get informa-

(*To page* 73)

Supervision *can* be democratic

by Eugene E. Jennings

Assistant Professor of Industry, Wharton School of Finance and Commerce
University of Pennsylvania

THE term Democratic Supervision suffers on the one hand from over-use and on the other hand from lack of definite meaning.

Despite its vagueness office executives and supervisors are prone to be very definite about its usefulness. Some believe that it is the latest in what is needed in the office while others believe it is something impractical. For example, in a recent conference, supervisors were asked what they thought of democratic supervision. Fifteen of the twenty supervisors had very definite opinions, of which eight were "all for it" and seven were "completely against it." The remaining five were undecided. However, it was very clear in their discussion that few understood about what they were either for or against and that those who were undecided reasoned that the others knew the least. The discussion ended in confusion primarily because some had taken a definite stand with regard to what they wanted but could not put down in words what it was. (One supervisor was so bold as to suggest that, "You guys don't know what you are talking about.")

The author on a number of occasions has confronted office executives with the question of "What do you think about democratic supervision?" Some are quick to speak for it and some are quick to disregard it as worthwhile. In most cases these executives show little understanding of what is really democratic supervision.

Therefore, this article will attempt to outline in detail what is democratic supervision, so that both office executives and supervisors can determine more clearly and precisely whether or not it has application to their problems.

1. The democratic supervisor is not the laissez-faire type of supervisor whose subordinates are left alone to decide their problems and recommend solutions. Actually what happens to this supervisor is that eventually a leader comes forth from the workers to define their demands. When the supervisor relinquishes his role as a leader, the workers become preoccupied over problems of finding among themselves a leader who will take their problems to the supervisor and demand action.

The autocratic type of supervisor who dictates to the subordinates what their problems are and how they should be solved creates an opportunity for a leader to arise among the workers and represent the workers' side of the question. This is the role of the office steward today where a union is organized in the office. He is needed because the supervisor either misrepresents office workers' problems or does not represent them at all to the superiors.

Today, in offices where there are unions, some office su-

pervisors are tending to leave the handling of many of the workers' problems to the union stewards. This type of supervision is potentially more troublesome than the autocratic type of supervisor. In any case, this much seems true. If the workers are either left alone or overtly dominated in determining and solving their problems, an informal leadership will arise among them that will be antagonistic to that of the supervisors. Democratic supervision recognizes leadership as indispensable and without adequate substitute.

2. The democratic supervisor does not relinquish a firm and direct approach to the workers. Many supervisors feel that they should reduce most of their persuasive influences when they are democratic. This is not necessary. Whereas autocratic force tends to bring out aggressive tendencies on the part of some workers and submissive tendencies on the part of others, a complete lack of firmness on the part of the office supervisor under the laissez-faire or leave-alone type of supervision tends also to create both aggressive and submissive tendencies among the workers. The important thing to remember is that in the latter case the emotion is not directed against the supervisor (as much as in autocratic supervision) but rather among and against the workers.

In other words, lack of firmness on the part of the office supervisor causes bickering, antagonism among the workers, while extreme firmness under autocratic leadership serves to solidify their emotion against him. It is hazardous to believe that the office supervisor should be reluctant to take a stand or position and to defend it.

In fact, workers often need supervision that is dependable and definite, and can be counted on to follow a steady plan of action. An essential element in democratic supervision is that the supervisor's stand which he takes with respect to a problem is one that has been prescribed by careful consideration of the workers' feelings. These have been solicited before the stand is taken, not afterwards. Even after the stand has been taken, the democratic supervisor leaves the door partly open for more facts and opinions and for the possibility that his stand is incorrect.

In this respect the democratic supervisor is dissimilar to the autocratic type, under whom the workers are seldom solicited and the door is always closed and the supervisor's "mind is made up." The laissez-faire type of supervisor never really knows when to close the door and to take a firm position. The essence of democratic supervision is to know how and when to make up one's mind and also be expert in knowing when and how to change it. This seems to be only practical.

Many supervisors have felt that little chance exists that they can ever be more democratic unless they become more friendly, sociable, understanding . . . while these are important, they do little to perform functions that the workers actually need . . .

3. Another mistaken notion about the democratic supervisor is that the supervisor should attempt to share the work of the subordinates. (To show them that the supervisor is not afraid to help them, to fill in when a worker is absent, or to give them a hand when needed.) The most effective supervisor is one who assumes the function traditionally accepted as that of a leader and does not engage in the work done directly by the workers.

There are a number of reasons why this should be so. For one thing, helping the subordinate out may show up the subordinate rather than help him. Second, when done too much, it may reflect on the supervisor's ability to distribute the work load and get necessary help. Third, the better interests of the workers are opposed, especially if the workers are highly unionized and insist that the supervisor refrain from doing work that will help to displace a worker.

But more important is the fact that to help workers out occasionally allows less time to do more important things. The better supervisors are the better planners, and spend more time thinking about what should be done rather than proceeding without preliminary preparation.

4. On the other hand, the democratic supervisor does not attempt to keep a close watch on each worker's needs and wants. The "check-up" aspect of supervision is less emphasized in democratic supervision. Democratic supervision is not the "breathing down the back" type nor the type that involves "making the rounds" to see what is needed or is wrong. Of course, "making the rounds" is to some extent necessary, but the greatest emphasis in democratic supervision is on the freedom that the worker has to go on his own volition to the supervisor, avoiding the pressure that usually results when the supervisor, regardless of his intent, goes to the worker to find out his problems.

The difference is very subtle, indeed, but so are the differences between successful and unsuccessful supervision. The feeling that workers can go to their supervisor has tremendous force in giving the office supervisor status and respect, and in the long run is far more forceful than the feeling that the supervisor can go to the workers and solicit their problems. Both types of access, however, are needed, but the supervisor's accessibility and not the worker's is primary to democratic supervision.

5. Democratic supervision is not a personal thing that is characteristic of some supervisors and not others. Leadership is not a specific trait or syndrome of traits that a person should possess in order to be a democratic supervisor. Few supervisors become democratic when they decide to acquire certain traits like that of friendliness, understanding, or respect. The conditions that determine democratic leadership lie among the people who lead and are led and not solely within the personal makeup of the individual who is the leader.

In this sense leadership is a social thing and traits that are desirable in one group or instance may not be in another. Trying to acquire the traits necessary to democratic supervision is similar to trying to find the right mask. Democratic supervision de-personalizes the supervisor and goes to something more important than traits.

For example, it recognizes the functional aspect of leadership in affirming that a supervisor is democratic by serving the interests of the workers. To perform a particular function any number of different traits may be desirable, depending upon the group of workers, their needs, and the

nature of the supervisor himself. From one standpoint it is unfortunate that supervisors who are democratic leaders also have certain traits commonly associated with democratic leadership. (This has duped many supervisors into believing that these traits are basic to leadership.) One cannot reverse gears and acquire democratic leadership by developing certain kinds of traits.

In the long run, the manner in which the workers' interests are served is less important than whether or not their interests are served. Whereas a supervisor who serves workers' interests is less subject to criticism on how he goes about it, the supervisor who stresses how he attempts to serve their interest is more subject to criticism if the workers' interests are not adequately served. Although *how* and *what* a supervisor does go hand in hand, democratic supervision emphasizes the functions that must necessarily be performed and emphasizes less how the supervisor chooses to perform them.

In other words, the door is left open for the supervisor, regardless of whether or not he has certain traits, to become more democratic. Many supervisors have felt that little chance exists that they can ever be more democratic unless they become more friendly, sociable, or understanding, for example. While these are important, they do little to perform functions that the workers actually need. The many supervisors who accent sociability do not necessarily testify thereby that they are democratic. Supervisors should quit chasing after traits in order to be democratic. Eventually workers can see through traits that are only skin-deep and not expressed in the performance of functions related to the workers' interest.

6. While performing these functions, supervisors should not get trapped into believing that to be democratic is basically to treat each individual as different. It should be noted that the autocratic supervisor does this as a way of keeping the group broken up. The author has heard many office supervisors preach that each office worker is in some way different, as are his problems and needs—and at the same time give him equal pay, vacation, sick leave, etc.

When the office worker is treated as a separate individual, he and his problems are often disregarded as being deeply rooted in the social relations of his fellow workers. Thus at times the worker may emphasize the group's problem as his own or his own problem as the group's. In the first case, when a worker approaches the supervisor with a personal problem and receives individual attention, the supervisor may be thoroughly embarrassed when another worker comes to him with the same problem. (This happens quite often.) The second worker thinks the same problem should receive the same treatment and the supervisor may agree, except that perhaps he did something for the first worker which he could not do for everyone because it might not serve the best interests of the group. How can the worker understand? Can the supervisor tell him that he is a different individual even though the worker retorts that the problem is nevertheless the same. (At this point the supervisor may be accused of playing favorites.)

One can see how frustrated one feels when this happens. Endless frustration is prevented when the office supervisor is conscious of the social relations that workers have and cognizant that what is seemingly a personal problem is perhaps the manifestation of a group problem presented through an individual.

A very relevant although perhaps academic statement is that supervision tends to personalize as well as socialize the workers. This means that the supervisor should understand how the way he treats a worker affects the group and how the group reacts not only to the worker but also to the supervisor himself. The idea of treating each worker's problem as necessarily different and in need of separate treatment is one of the major misunderstandings about democratic supervision. Democratic supervision is oriented toward individuals who are not only separate entities but also group members whose problems arise out of their social activities, and thus proper solution is determined by what might happen to the group as well as to the individual who is being acted upon directly.

The consequences of not recognizing the social aspects of the worker are very real.

(*To page 66*)

The best supervisor is one who plays the "leader" role . . .

. . . and does not attempt to share subordinates' work

Contrast between natural materials, sleek design is dramatized in reception area

Stauffer offices maintain—

The luxury tradition

But new offices on site of old Ritz-Carlton Hotel have achieved high efficiency as well

Corridor walls of interior offices are unpolished glass

AN ATMOSPHERE of restful, open spaciousness, reminding the visitor that nature is the primary source of all chemicals, industrial or agricultural, is the first impression given by the new offices of the Stauffer Chemical Company, at 380 Madison Avenue, New York, the new office building on the site of the old Ritz-Carlton Hotel. This first reaction is emphasized by the green plants in built-in planters that line the sides of the reception foyer, and the wicker weave front of the blond walnut reception desk in the center of the room.

But the reception room strikes the other keynote of the Stauffer offices as well, through the modern abstract design that dominates the walls. The continual contrast between rough, natural materials, and the sleekest type of contemporary design is one of the most striking effects of the Stauffer offices.

The quality of clean spaciousness which is so conspicuous throughout the offices is heightened by the use of recessed enclosures to store supplies, and equipment. Closet space and storage areas, for instance, are concealed behind sliding panels, while specially designed drawers in the custom-built executive desks receive dictating equipment when it is not in use.

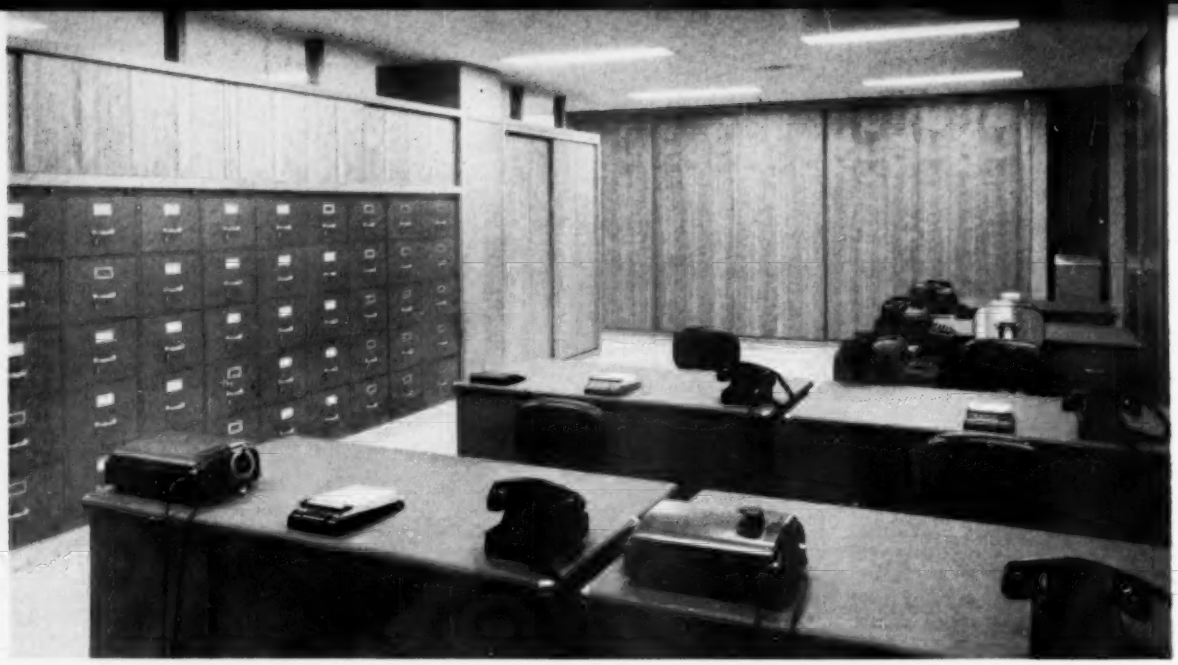
Focal point of interest for all visitors in the corridor leading from reception to the top echelon executive offices is the company board room. The wall of the room on the corridor side is clear glass, making the entire room visible from the outside. (Floor to ceiling draw draperies curtain the room when the board is meeting). The oval conference table is blond walnut, and the deeply upholstered directors' chairs are specially designed.

Office of H. Stauffer, company president

Down the corridor from the board room are found the pleasantly spacious quarters of company officers. Each of these offices has one wall of solid gray walnut paneling, plus a floor to ceiling door of walnut to retain uniformity of design. A second wall in each of these offices features paneling in any one of a variety of materials—leatherette, rubberoid material, grass cloth, colored burlap, etc. Since the company's chemical products are used in a vast array of industries, the diversity of substances and materials used in decoration is thematically related to the company's products. Planning along these lines was done by Christian de Dampierre, Stauffer treasurer, and A. H. Swanson, the company's general credit manager, both of whom worked closely with J. Gordon Carr, New York architect; Carr's decorator, Leigh Allen; and John Crone, floor covering specialist. All of the custom woodwork, paneling, and desks were created by Ammann-Goertz Company, cabinet makers.

Evidence of scrupulously careful planning for employee

Sales Department General Office features semi-private units divided by cork-paneled walls



Files are recessed in secretarial area; storage areas at rear have sliding birchwood doors

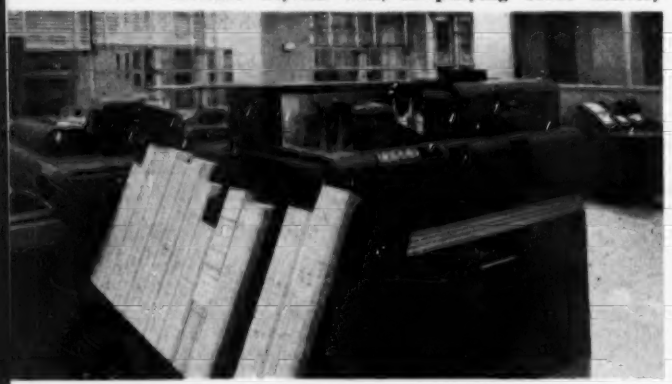
comfort is seen everywhere in the offices. A gaily decorated Coffee Bar-Lounge serves as a center for coffee breaks, and for employees who eat their lunch in the office. The attractive lounge, which has a large mural of Fisherman's Wharf, San Francisco, on one wall, has facilities for complete self-service by employees, and provides hot plates and dishwashing facilities.

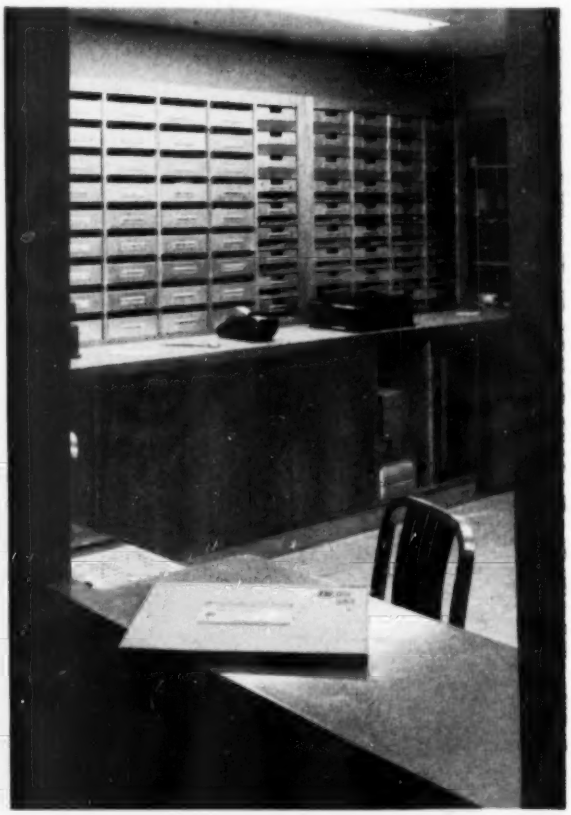
Similarly, the two powder rooms for women employees feature bright wall paper, rich fabrics, plentiful mirrors with good lighting.

To create additional storage area and to keep floor space as uncluttered as possible, the area above files and other office equipment adjacent to wall partitions is used for additional concealed shelf compartments. General Secretarial, Accounting, and Sales are all self-contained units; each has its own recessed files, cabinet storage space, etc., concealed by sliding panels. In the General Sales Area, cork partitions are used to give each occupant a semi-private working atmosphere, and to help in soundproofing. A smooth flow of office traffic is assured by placement of the Stenographic area adjacent to Sales.

The asymmetrical beauty of natural materials—contrasted with a recurring motif of engineering precision—lends a special distinction to every part of the Stauffer offices. Diversity of materials, accent on light, the imaginative use of color and space, help maintain these qualities. The new Stauffer main offices reflect the basic attributes of the chemical business as well as the attitudes of the company: belief in intelligent research and planning, a sense of the future, efficiency—and pronounced good taste.

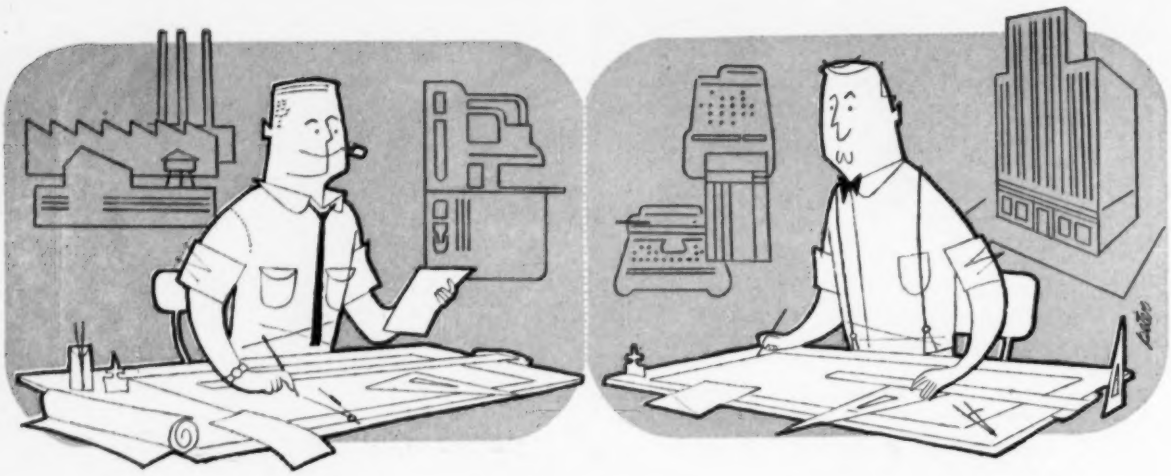
Below: IBM room. Right: Mail room. Boxes are accessible from corridor beyond wall, simplifying office delivery





Board room is dominated by abstract mural. Folding doors in board ante-room form paneled wall when closed

Nor has employee comfort been forgotten. Above, right: One of two powder rooms. Below: Coffee Bar-Lounge



Office itself must share in tool development

by R. L. Harrell

The Reader's Digest Association, Pleasantville, N. Y.

(Based on an address given by the author before the Westchester Chapter, National Office Management Association.)

WE ARE all wishing for, thinking and talking of the many benefits to be derived from further development of electronics and the attainment of the elctronic era. For most of us, this era is still in the future. As some of you know, Metropolitan Life, U. S. Steel and General Electric are engaged in the application of involved electronic data-processing equipment and, in each case, at least 50 man years of endeavor have gone into its application to the work for which it was acquired. I maintain that the office management profession as a group is in no sense ready for the electronic era. We have hardly scratched the surface toward taking advantage of established and accepted mechanical and electrical engineering practices long in use in the plant.

Rather than tackle a program of development and self-help, I believe there has been an inclination to wait for some great white father, possibly represented by the office machinery and equipment industry, to solve problems with a package off the shelf. There may, perhaps, have been a feeling of indignation in finding that once the solution was available, it did not quite represent the exact specifications initially determined. So with no alternative, the product was purchased, or it was decided to continue on as before. I do not wish to imply that the office manager is without imagination. On the contrary, I find him quite imaginative. I wish to imply that training and experience of a technical nature has often been lacking and, therefore, when pressed for time, the conversion of imagination into working devices has been deferred. You may construe this as a rather strong and condemning type of statement. Here are some of my reasons for such a conclusion: Engineering techniques have provided a major contribution to the fantastic industrial progress which has been made. There has been very little incentive to apply these techniques to clerical problems.

It was not necessary for the executive management group to concern itself unduly with clerical problems, since they considered that profits came from manufacturing and sales techniques. This story has been so often re-hashed that it has reached the point of boredom, so I will not go into detail. But listen to this! "The office is 30 years behind the factory in the application of mechanical equipment." "Only 15 per cent of office work is done by machines, compared to the more than 90 per cent mechanization found in factories." These statements are not mine, though I subscribe to them. They were made recently by Mr. William R. Mullee, Professor of Industrial Engineering at New York University. I consider this as direct and justified criticism of our chosen profession which cannot be refuted and which must be countered by action rather than excuses. Though there has been talk and consideration, the engineering and inventive techniques which have made this manufacturing progress possible, have not worked their way into the office except on a limited basis. Please ask yourself these questions:

How many offices have a budget, providing for development of jigs, fixtures and equipment modifications to suit their specific requirements? Do you agree that money should be spent for such items? Without budget provision, perhaps we often procrastinate and neglect such activities.

How many offices—large or small—have taken advantage of modern materials-handling techniques? I refer here specifically to the use of conveyors and special handling equipment in the office.

How many offices have faced demands of organized labor that force one into higher productivity to compensate for higher wages? Believe me, this has been a strong force in development of many automatic factory operations. It is true that our clerical wage rates have increased, but apparently the increases have evolved in such an innocuous manner that they have not shocked us into action.

Each of those factors previously mentioned has been a motivating force for mechanization in the plant or factory area. I maintain they have not been equally present in the office. While manufacturing manpower, per sales dollar, has been decreasing, the clerical manpower requirement, per sales dollar, has been increasing. Of course, costs and profits fluctuate directly with manpower requirements and sales. It's easy to blame this trend on increased paper-work if

you choose, but perhaps we should not be too sympathetic nor too impressed by such an excuse. Certainly paperwork has increased. It has been increased by the same forces that have acted to stimulate development and self-improvement in the plant; but, we have been inclined to accept increased office costs as inevitable, unless we could apply standard available office equipment, without modification, toward its reduction. As a result, productivity of the factory worker has increased more than wages. I believe that productivity of the office worker has actually decreased in the past ten years.

Factory management has found that engineering for productivity could not be left entirely in the hands of the plant manager. It has also found that it could not always wait for the equipment manufacturing industry to present it with equipment when, and as, needed. You will usually find an experienced engineering staff hard at work developing new production facilities, tools and techniques in the factory area. They do not hesitate to call on experienced consulting services, if they feel that their methods can be improved by so doing. Of course, they always plan to use established and available equipment when practical, but they must not wait. There is no reason why the factory engineering philosophy should not apply to the office, but it has not been so applied. If you think otherwise, I would suggest that you look around your office, or mine, and count the machines and devices that have been developed to solve your specific problems. Walk into any manufacturing plant, including your own, and do the same. Normally, you will find quite a contrast. Why should this contrast exist?

Well, perhaps our executive management is unsympathetic. This can usually be traced to the fact that the problem has not been presented in a manner which has appealed to them. Have you ever presented a proposal, converting your potential cost of reduction into profits, then determining the required increase in manufacturing and sales volume to provide an equal increase in profits? Do you know the amount of capital funds available and the return expected by your company on its investments, to justify development? How much confidence does your executive management have in your technical ability along engineering lines? What is the possible obsolescence factor of both present and proposed equipment? Normally, we project our present cost into the future for comparison with a contemplated change. How much more might your present operation cost in the future, due to obsolescence, deterioration and decreased effectiveness of present equipment?

Perhaps the office manager feels that it is the duty of the equipment manufacturers to provide him with the necessary tools; as an industry it has produced wonders but certainly we are aware that it can only afford to provide tools required by a mass market. Our problems certainly do not always represent those of the masses. Many equipment manufacturers have spent hundreds of thousands of dollars in attempts to develop products for the specific needs of a customer, only to find that the market for such a development was too limited to provide any return on their investment.

Perhaps there is a reluctance to face a temporary increase in cost which always precedes any reduction resulting from new development. There are always varying degrees of research, engineering, shop work, development of operating techniques, and training of personnel. Perhaps, many times we hesitate to approach our executive management with proposals because of these somewhat unknown factors.

Perhaps the office manager is inclined to be cautious rather than bold. Development is usually a gamble. You must go through a period of "derring-do."

Assuming one of us is among those who have been derelict, or lacking in the necessary fortitude for such a development program, there might be a very natural question of "What do I do?" I do not have a pat answer to this question. In the vernacular, there is no "quick and dirty solution." I do have suggestions:

No. 1: Secure approval of a budget, equal to at least 5-10 per cent of your payroll, for mechanization development projects.

No. 2: Contact all the machine shops, the die makers, and the cabinet makers in nearby communities. Develop their interest in helping you to work out your problems. They will probably be able to call on someone, with designing ability, to assist.

No. 3: Borrow an engineer from your engineering department. Be sure it is for a period long enough to include providing him with knowledge of your problems, for development time, and for installation and follow-up in making any new developments work.

No. 4: Retain an experienced engineering firm to work with you on analysis and design problems. There are many well-qualified consulting firms available, with proven records of accomplishment.

If your problem is of sufficient magnitude you should consider these suggestions:

A: Hire an experienced engineer, with mechanical design and perhaps a bit of electrical experience, coupled with exposure to industrial engineering in the office area, in short, an office engineer.

B: Hire an experienced industrial engineer with a record of unique accomplishment in the office area, *or*—

C: Hire a young engineering graduate, with mechanical or electrical training, and good analytical design aptitude.

Most important of all, do not neglect self-education. Very few of the great inventors had formal engineering training. They were objective. They looked outward. They found a problem, and they found a solution. There seems to be a great void between the man with problems and the man with solutions. It is entirely up to you to fill that void. It is to your own interest and to that of your company.

Is mechanization of the office lagging behind the advances of the factory because there is too little research and experimentation in developing special equipment for individual offices? Why not budget for office tool research just as factories budget for special tool design and manufacture?

CASE OF THE MONTH

Tenth of a series describing how concerns have improved office methods and procedures

10 Mechanized production control brings speed, savings, to G. E. Utica plant

SPEED, accuracy, savings, morale are the benefits a mechanized production control system has brought to General Electric's French Road Plant in Utica, N. Y. These are the savings and other advantages attributable to the Flexowriter, on which the new system is based:

1. Speed. The Flexowriter types information automatically at the rate of approximately 100 words per minute as compared with speeds of 25 to 30 words per minute which is the average manual typing speed for this kind of work. The tape, punched as a by-product of automatically typing documents, controls a card punch to eliminate another manual keyboarding operation.

2. Accuracy. Information typed on the Flexowriter and punched in tape need be proofread only once. In this system proofreading becomes "life verification" in that two additional forms are being produced at the same time. The error factor is so slight it is almost impossible to measure, according to General Electric. Since the tape is correct, all documents and cards produced from the tape will be correct.

3. Dollar savings. In the ordering section, Flexowriters have made possible a 45 per cent personnel savings. Furthermore, spoilage due to incorrect transcription of figures is virtually eliminated, and it is estimated that the Flexowriter alone is responsible for an annual accuracy savings of $25,000.

4. Morale. A smooth, efficient, well-organized operation gives a sense of satisfaction and leads to better performance. In the ordering section, Flexowriters eliminate the monotony of manually typing repetitive information by substituting speed and automatic operation.

General Electric's French Road Plant manufactures electronic equipment against contracts, and, although the number of contracts is small, each one may include from five to seven thousand parts. Some of these parts are manufactured and sent to stock for withdrawal, some are purchased and delivered to stock and some items are already in stock.

After engineering and design work are completed for each of the parts in an assembly, ordering sheets are prepared. These show schedule dates, the contract number, quantity, and name of each item necessary to the contract. The ordering sheets also show the source of the part (make, purchase or stock) as each category must be processed differently. All subsequent records are transcribed from the ordering sheet: a material requirements list for each part, stock records, purchase order requests, and fabrication orders on the shop. From the fabrication order on the shop, shop paper, payroll data, and cost data are obtained.

In the case of items to be manufactured, a bill of materials, called a Fabrication Status Sheet, is prepared from the ordering sheet. This gives the shop order number and the assembly number, and lists each of the items required by the assembly. For each item, a production record card and stock room material release tickets are prepared. These require the description of the item and the heading information which is on the Fabrication Status Sheet.

Before the production control system was mechanized, it was necessary to type a Fabrication Status Sheet and proofread it, type or write a production record card and proofread it, and type or write a stock room material release ticket and proofread it. The Fabrication Status Sheet then went to the "paper making" department. Next, the Process Sheets, which show the operations required to make each part, were typed. The Process Sheets were 3 x 5 hectograph masters. The heading information was copied from the Fabrication Status Sheet and the other required information was copied from Planning Cards. The Planning Cards show operations, details of the work to be performed, station, amount to be paid, etc.

The Process Sheet masters were run to produce the shop paper. This included paper required for blueprints and raw materials, identification tags, progress tickets, move tags, etc. Also included were vouchers to pay the operator. A voucher was given to the operator, validated when the job was completed and then went to the Payroll Department where it was used to pay the operator and distribute labor cost. The payroll information and cost data were both assembled manually.

Under the new mechanized system based on Flexowriters, one typing and one proofreading operation create these documents: Fabrication Status Sheet, production record card for each item and stock room material release tickets. Before, three typing and three proofreading operations were required. In addition to these documents, the same typing and proofreading operation also produce a production order tabulating card which is the master card for the preparation of the shop paper. (Figure 1, opposite page.)

All Flexowriters in this system are Model FPC-8 Flexowriters arranged to operate with 8-channel tape for tape-to-card punch. Model FPC-8 Flexowriters are also available for use with the tape-to-card punches. The Duplex-Transmitter and Recorder-Reproducer Receiver, described below, are also Model FTM Flexowriters. Model FTM Flexowriters are inter-connected by an electrical cable.

Recorder-Reproducer. This machine includes the typing unit, a built-in tape punch and a tape reader. It provides for typing copy, punching tape, reading tape and reproducing tape.

Duplex-Transmitter. This machine is equipped with two tape readers. It provides for typing copy and reading two tapes alternately. In addition, it is capable of transmitting

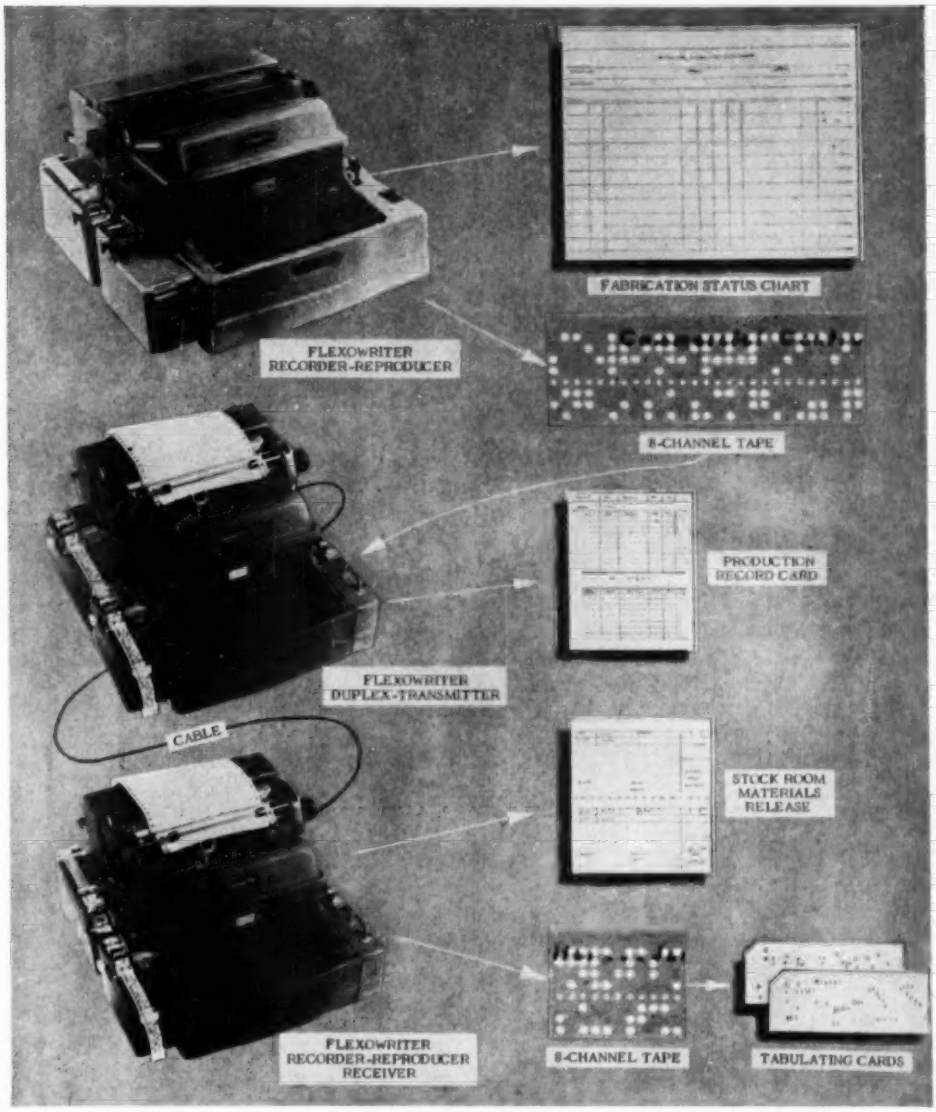


Figure 1

information typed either manually or automatically to the Recorder-Reproducer-Receiver which is cable-connected to it.

Recorder-Reproducer-Receiver. This machine has all of the features of the Recorder-Reproducer and, in addition, is capable of being operated from the cable-connected Duplex-Transmitter during which time the transmitted information can be punched in tape simultaneously with the typing.

The By-Product Tape produces documents and tape for tabulating cards. In preparing production orders for items to be manufactured, the Fabrication Status Sheet is typed on the Recorder-Reproducer. Shop order and assembly number are typed in the heading and each internally manufactured part used in the assembly is simultaneously recorded in tape, in the form of code holes, as a by-product of the typing operation.

After the shop order number and the assembly number are typed and punched in tape, four or five inches of blank tape are fed out. This separates the heading from the list of items used in the assembly. When the Fabrication Status Sheet is completed, the tape is removed from the Flexowriter

Figure 2. Flexowriter Recorder-Reproducer

and cut apart at the feed holes into two tapes: one with shop order and assembly number only, the other tape with the listing of parts for the assembly. The first tape is glued together to form a loop and inserted in the front reader of the Duplex-Transmitter. The tape with the listing of parts is placed in the back reader. (Figure 3)

Production record cards (Figure 4) are typed automatically by by-product tape on Duplex-Transmitter, and information is transmitted to Recorder-Reproducer-Receiver.

Individual production record cards are required for each part in the assembly and include the heading and one item. The Duplex-Transmitter reads the two tapes alternately and automatically types the heading and one item on each production record card, a continuous form. At the same time the production record card is being typed automatically, this same information is being transmitted to the Recorder-Reproducer-Receiver which is cable-connected to the Duplex-Transmitter. The Recorder-Reproducer-Receiver automatically types the stock room material release form, a two-part continuous form, and punches a composite tape. (Different tab stops and line spacing are used on the machines since the size of the forms differs. However, the information required is the same. The composite tape has exactly the same information as the production record card and the stock room material release forms and in the same sequence.)

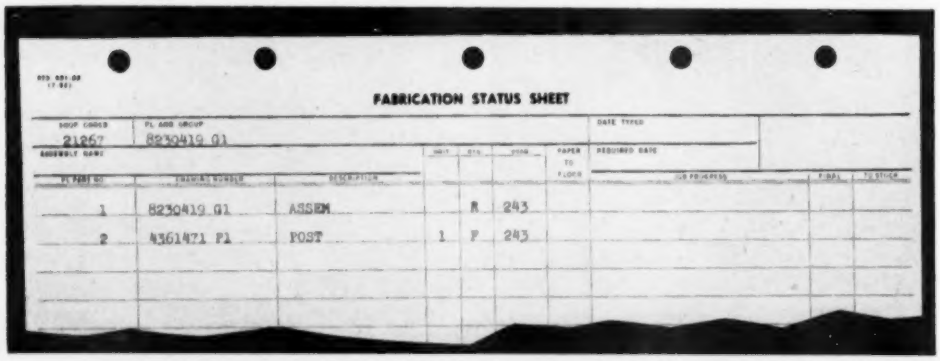
During the automatic typing operation, the production record card is proofread against the ordering sheet. If an error is found, the correction is made through the keyboard and is recorded in the composite tape. The original tape is no longer required and is destroyed. The composite tape is used in tape-to-card punch to produce a production order tabulating card for each item ordered. This tabulating card is the master for as many cards as required for production control. The composite tape is then filed for use when required by multiple releases or repeat orders.

The production record card is filed as a record of ordering. The stockroom material release tickets are filed until the order is released to the factory. The Fabrication Status Sheet and production order tabulating card go to the paper making group.

The paper making group pulls from the file the Planning Card for each item on the Fabrication Status Sheet and makes copies of it on a photo-copying machine. These copies of the Planning Cards, which show required manufacturing operations, are the Process Sheets. From the Process Sheets, tabulating cards are punched with piece-work rate, operation number, station, job code, etc.

These tabulating cards and the production order tabulating card are processed through punched card equipment to produce tool cards, raw material cards, identification tags, job progress cards, job record cards and payroll voucher cards. Except for the Process Sheets, all of the shop paper consists of these tabulating cards.

(*To page* 73)

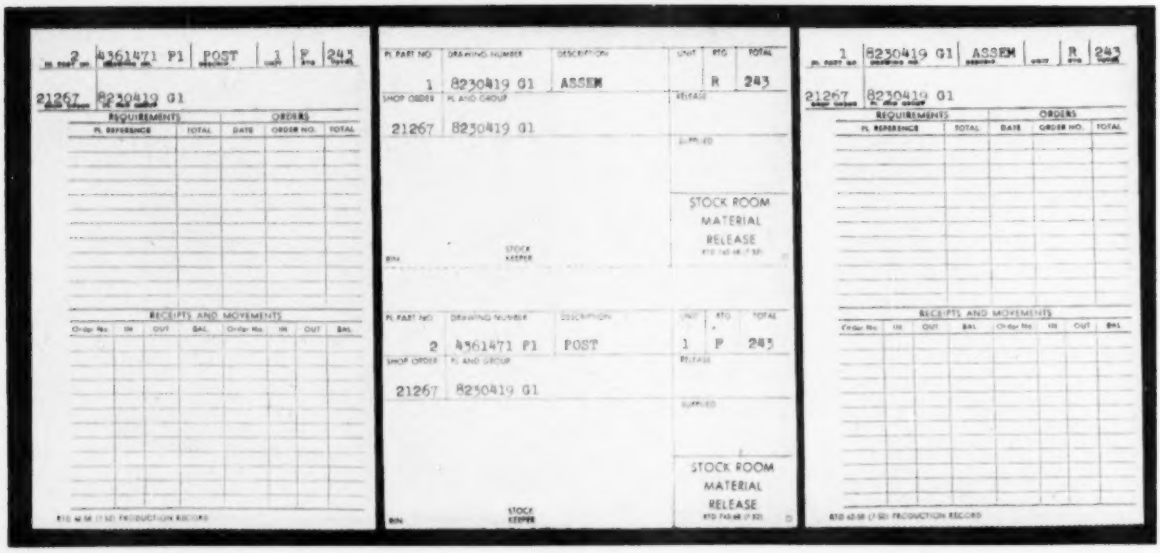


FABRICATION STATUS SHEET

SHOP ORDER	PL AND GROUP	DATE TYPED
21267	8230419 G1	

PL PART NO	DRAWING NUMBER	DESCRIPTION	UNIT	RTG	TOTAL	PAPER TO FLOOR	REQUIRED DATE	JOB PROGRESS	P.BAL	TO STOCK
1	8230419 G1	ASSEM		R	243					
2	4361471 P1	POST	1	P	243					

Figure 3



2 | 4361471 P1 | POST | 1 | P | 243

21267 | 8230419 G1

REQUIREMENTS: PL REFERENCE | TOTAL | ORDERS: DATE | ORDER NO. | TOTAL

RECEIPTS AND MOVEMENTS: Order No. | IN | OUT | BAL. | Order No. | IN | OUT | BAL.

R10 42-58 (7-52) PRODUCTION RECORD

Figure 4

PL PART NO	DRAWING NUMBER	DESCRIPTION	UNIT	RTG	TOTAL
1	8230419 G1	ASSEM		R	243

SHOP ORDER: 21267 | PL AND GROUP: 8230419 G1 | RELEASE | SUPPLIED

STOCK ROOM MATERIAL RELEASE

BIN | STOCK KEEPER

PL PART NO	DRAWING NUMBER	DESCRIPTION	UNIT	RTG	TOTAL
2	4361471 P1	POST	1	P	243

SHOP ORDER: 21267 | PL AND GROUP: 8230419 G1 | RELEASE | SUPPLIED

STOCK ROOM MATERIAL RELEASE

BIN | STOCK KEEPER

Figure 5

1 | 8230419 G1 | ASSEM | | R | 243

21267 | 8230419 G1

REQUIREMENTS: PL REFERENCE | TOTAL | ORDERS: DATE | ORDER NO. | TOTAL

RECEIPTS AND MOVEMENTS: Order No. | IN | OUT | BAL. | Order No. | IN | OUT | BAL.

R10 42-58 (7-52) PRODUCTION RECORD

Figure 6

American offices need to review—

Practical values of records management

by Paul Denoncourt
Space Planning Department, Ebasco Services Inc., New York
(Based on a speech delivered by the author before the Office Executives Association of New York.)

"HOW and to what extent does a Records Management Program (or the lack of it) affect the space requirements of an organization?"

So that we can be aware of the two major parts of this problem, a statement concerning the two facets is pertinent at this point.

A sound records management program should include these basic elements:

1—Control of records generation
2—Functionally designed, easy-to-use filing systems and procedures
3—Comprehensive protection and preservation of vital records
4—Comprehensive disposition schedules.

Space Planning is a term that has become more familiar to businessmen in the last few years and has been subject to wide interpretations. Though it may be over-simplification of a complex and highly specialized field—space planning in its overall sense aims for the maximum utilization of space in terms of the functional effectiveness of the operations to be housed.

Our discussion here is limited to the relationship between the administration of records and space required for those records.

Business executives today are faced with a growing mountain of paper which is the result of many factors. The two major reasons are (1) increased regulation by Federal and state governments and other regulatory bodies and (2) an apparently increasing inclination on the part of individuals to save records as a defense against possible future questions or attacks on their actions. This inclination is symptomatic of this age of investigations.

These factors complement the normal inertia of the human animal when it comes to throwing anything away. You need only look in the average attic to find any number of articles that have been stored there with the thought in mind that "I might need it someday." But the day arrives when the attic (or the company file room) is filled to capacity. And this is the time when a resolute decision is made to clean the attic. This is the time too, when management usually decides that something must be done with the files. This is unfortunate but true to a large extent throughout business. Only a relatively small number of companies have been foresighted enough to meet the problem at its source—the creation of records.

Now what does all this mean to the executive whose responsibility it is to control operating and administrative costs in a company? What it should mean but frequently doesn't is that this phase of running an office is a minor part of the overall when it is viewed from a cost standpoint alone without relating it to the total picture—in other words in seeing the problem of records management in true perspective, which is as it relates to the net effectiveness of the payroll dollar involved. This is the crux of our problem.

The aspect of cost is also insignificant when compared to the effect that poor records management has on the ability of management to make intelligent decisions quickly. The true measure of value of any part of a business operation is the extent to which that part contributes to the profits of the enterprise. When it is realized that the single most valuable investment a company has is in its executives, its management and its employees, then any step which contributes to their greater effectiveness is a means of increasing profits.

The proof of a well-designed filing system is the time it takes to find a particular record

Records are one of the essentials of successful administration and provide a basic tool for the continuance of operations. The records of a company are the history of its life and form the basis for vital decisions affecting its future.

We have discussed the importance of records to a business in terms of successful operations and administration. Now let us look at the costs involved.

It is estimated that one file clerk is required to service 12 active four-drawer filing cabinets containing correspondence.

Analyses made by competent authorities place the cost of originating the contents of a standard 5-drawer cabinet containing correspondence at about $5,000 or about $1,000 per drawer.

The annual cost of maintaining a standard 4-drawer cabinet is about $200 and this figure does not include supervision, maintenance, taxes and clerical work space required.

From these rough estimates it can be seen that an organization with 100 4-drawer file cabinets has an investment of some $400,000 in initial cost and an annual operating cost of well in excess of $20,000. Thus it will be readily appreciated that it is the inventory value of the records that is the key to appraising our problem. By inventory value I mean the cost of creating the record including the time of the man dictating or recording the original material, the time it takes the steno or typist or clerk to put it in usable form, the cost of supplies, etc.

In terms of cost then we are not dealing with trifles.

The next question that the harried executive mentioned earlier must face is how to reconcile two seeming irreconcilibles. If records must be kept because they are essential to the business, how *can* the costs of keeping them be controlled? The answer of course, is an effective records management program including the four basic elements mentioned above. Let's review these elements briefly—the first was (1) control of records generation. This means that a hard look must be taken at the type of records that are originated in the various departments of the company. Analysis of the work done by employees and management as well will reveal that their major activity is either in the creation of records or the processing of records. Therefore this problem must be related to manpower if a true appreciation of costs is to be gained. Each record, report or form can be costed to determine if its value as a management tool is worth the effort and money to produce it. Various controls should be instituted to avoid duplication and to make certain that each record has a valid reason for its creation and for its continued existence. In our own experience we have found that costing on a per drawer basis or on a per cabinet basis doesn't make too much of an impression on managements—but—when an executive is told that a report he receives every Monday morning costs $150 to prepare he very often says, "It isn't worth $150 to me."

The second element: functionally designed, easy-to-use filing systems and procedures—the proof of a well-designed filing or records keeping system is in the time it takes to find a particular record. This assumes that it will be found when needed and that the time it takes to find it in the file will not be much in excess of 45 seconds.

The third element: adequate protection and preservation of vital records. Such vital records as corporate documents, basic financial and accounting records, original leases, deeds, agreements, engineering maps and tracings are all examples of vital records requiring either protection or preservation or both. Protection means safeguarding records from loss by fire, theft, water or destruction by other means. Preservation refers to the provision of humidity control to protect the records from deterioration through age or excessive humidity. A simple means of determining the need for preservation and protection is to ask the supervisors this question: "If this record were destroyed, how much would it cost to replace it?" Invariably where vital records are involved the question is met with a shuddering reply that "It would cost thousands" or "I can't begin to estimate the cost" or "They are simply irreplaceable!" Yet in spite of the known value of these records and in spite of the feeling—bordering on neurosis—that people have for saving records—in spite of all this we have been astounded to find that in over 50 per cent of our clients little or no protection or preservation is afforded. The attitude is casual, not to say indifferent. Of course, we have never been able to get a satisfactory reconciliation in these two approaches—I suppose we never will.

(*To page* 30)

WHAT TO DO?

IN THE May issue of *Office Management,* a new department, WHAT TO DO? was inaugurated, to permit readers to present problems which had come up in their experience, and request suggestions from other subscribers as to their methods of handling the particular problems outlined.

The first situation was presented by Mr. W. H. Broderick, Eclipse-Pioneer Division, Bendix Aviation Corp. The problem he posed: his company at that time was distributing as many as 200 copies of notices to various Department Heads, so that each head had sufficient copies to send on to his supervisors, or other personnel concerned with the particular notice. All the copies eventually arrived in individual files, resulting in more requests for filing equipment and space.

Mr. Broderick asked for suggestions as to how the necessary information could be directed to all personnel concerned without creating further paperwork, while at the same time insuring that notices are destroyed after receipt instead of being filed.

Some of the solutions offered by readers to Mr. Broderick's problem are offered below as well as (see cut below) the solution finally evolved. We invite all readers to submit problems which have arisen in their offices, and on which they would like suggestions from other subscribers.

Editor, *Office Management*
Dear Sir:

Re the Problem of Excess Copies of Notices posed by Mr. Broderick:

There are two obvious approaches to the problem. That offering the least departure from established, and presumably essential, routine is to imprint the paper used for such notices with the legend DO NOT FILE or its equivalent. Perhaps a certain color of paper may be used to emphasize the point.

Another method would be to send to each Department Head a predetermined number of copies; in each of the departments the Secretary would affix a Distribution Slip with the names of each person to see the notice printed thereon with a space for his or her initials. Each in turn would initial the slip and pass the notice to the next in line; the last in line would a) destroy the notice or b) return it to the Department Head for review of initialed acknowledgments and destruction.

Both plans have obvious objections and equally evident advantages which only the interested office manager can evaluate.

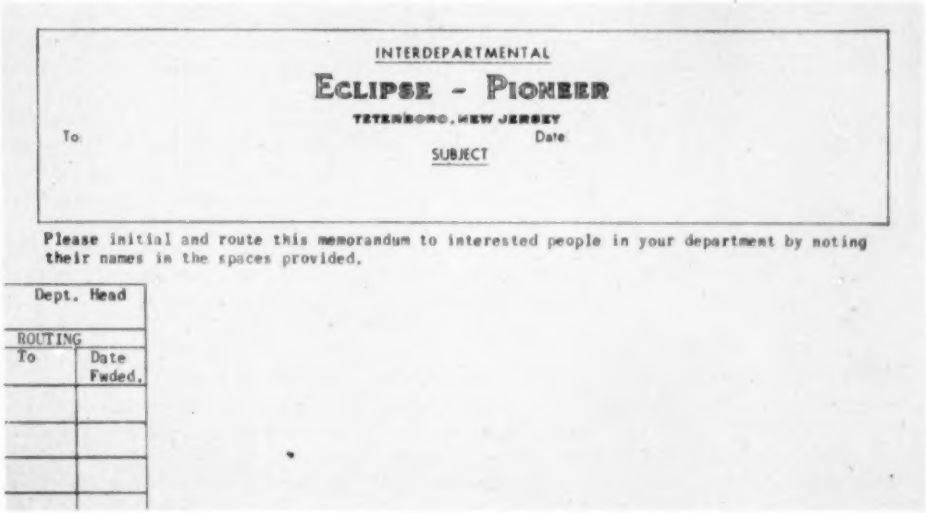
Yours very truly,
G. E. JOHNSON,
Sales Agent,
Greensboro, N. C.

Editor, *Office Management*
Dear Sir:

I have received my first copy of OFFICE MANAGEMENT and am thoroughly enjoying it. I feel that your WHAT TO DO column will be of much benefit in helping to solve mutual problems.

It seems to me that Mr. W. H. Broderick's problem of circulating notices could be somewhat simplified by the use of a route sheet. One copy of the notice could be sent to each Department Head, who, after noting, would attach a route sheet containing the names of all of his supervisors. Each supervisor would initial or check off his name when he has read the notice and send it to the next name on the list. After the paper has been circulated among all the supervisors it should be returned to the Department head for his files or other disposition. This would, of course, necessitate prompt handling of the paper so that the information would be disseminated quickly but might solve the problem of excessive copies and duplicate files. It might be necessary

This is the form finally used by Eclipse-Pioneer to overcome the problem outlined in the May issue. After routing, initialed memo form is returned to department head for disposition



INTERDEPARTMENTAL

ECLIPSE - PIONEER

TETERBORO, NEW JERSEY

To: Date

SUBJECT

Please initial and route this memorandum to interested people in your department by noting their names in the spaces provided.

Dept. Head	
ROUTING	
To	Date Routed.

to divide a large department into sections with two route sheets and two copies, if greater expedition is desired.

Yours very truly,
(Mrs.) Laverne Bliss,
Personnel Assistant,
State Department of Health,
Lincoln, Nebraska.

Editor, *Office Management*
Dear Sir:

The writer will attempt to answer Mr. W. H. Broderick's letter addressed to you, trying to incorporate his answers from the memorandum that Mr. Broderick sent to all his department heads.

From the memorandum as previously mentioned, the thought occurs to the writer if Mr. Broderick ever thought of using bulletin boards. By the use of one bulletin board for each department, he could convey any notice in changes in personnel, new assignments, holiday notices, and similar letters to all the personnel in that department. For your information we utilize the bulletin boards in all departments here at our division.

The writer wonders why Mr. Broderick could not initiate the medium of each department head calling a meeting for the supervisors under his direction and from that meeting the supervisors could pass on any information verbally to the employees under their supervision. In other words, why does all this information have to be in writing?

The supervisors being at this meeting, it would be an opportune time to discuss other present issues at hand.

Yours very truly,
THE OHIO POWER CO.,
C. C. Aitkin,
Supervising Clerk, Tidd Plant,
Brilliant, Ohio.

This month, Mr. Broderick has submitted a new problem for which suggested solutions are requested. The text of his letter follows:

Editor, *Office Management*
Dear Sir:

It may be that some of your readers could give us some suggestions through your "What to Do?" column on foolproof follow-up systems. We have in mind something that a large corporation such as ours could use in the various departments and that would be effective for a period of six months to one year.

We have a conglomeration of follow-up systems ranging from an ordinary calendar pad to an elaborate hand tooled leather folder on an executive's desk. They all have their limitation in that they are not foolproof, they do not cover a long enough time period or they become too bulky. Another problem we have on follow-up systems is that while one secretary may operate her follow-up system in her own way, when she is away on vacation or a new secretary is assigned, the follow-up system becomes a mystery to the new operator.

I imagine all your readers have the same problem, but it may be that someone somewhere, has something he regards as absolutely the last word in this type of operation.

Very truly yours,
W. H. Broderick
General Office Manager
Eclipse-Pioneer Division of
Bendix Aviation Corp.
Teterboro, N. J.

All readers who may have solutions to the problem raised on follow-up systems are invited to send in letters for publication in this department.

Records management—

(*From page* 28)

And the fourth element: comprehensive disposition schedules—the word "disposition" has been used deliberately in that it embraces some of the actions that can occur—these are (a) transfer to semi-active files (b) transfer to central archives (or records center) and (c) destruction—either through shredding, burning or sale to a salvage company. In the setting up of the program retention schedules are established for each record. These schedules specify the time it is to be retained in active departmental files and whether at the expiration of that period the record is to be transferred or destroyed. The schedules must reflect the requirements of the regulatory bodies having an interest in the records, must conform to any legal requirements and company policy, and must take into account the requirements for operational effectiveness.

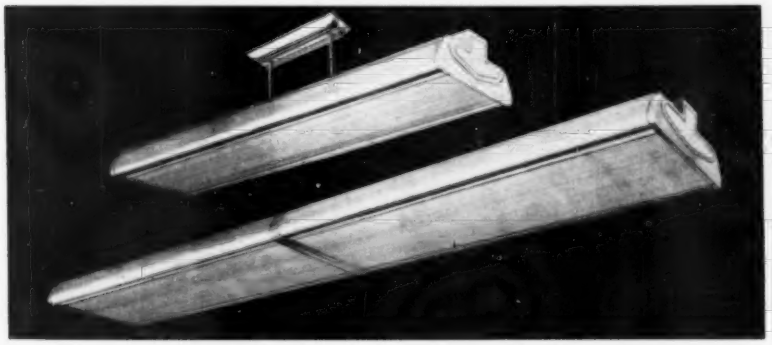
Assuming now that a records management program has been set up in a company with an acute records problem, where do we go from here? The mere setting up of a program is but a preliminary if the problem of records administration is to be solved and if the maximum utilization of record-keeping facilities is to be realized.

The Hoover Commission's report to the President contained what was to many an unbelievable statement—that less than 10 per cent of the records surveyed must be kept permanently; that only about 20 per cent need be kept in office space; that 30 per cent can go to less costly space for retention for specific periods; and that about 35 per cent can be destroyed! These findings have been verified as applying to business as well by many other groups acting independently since then.

Obviously, if we accept the statement or even modify it somewhat, we know that significant savings in personnel, upkeep costs and space can be realized. But the disposition of records cannot be accomplished on a casual basis nor can it be done by *any* member of the organization.

Therefore, it follows that a qualified individual must be selected to supervise and control the program if it is to achieve its objectives. In larger companies, this would be a full time job. This individual (whom we shall call a Records Supervisor) should have a general business background, be familiar with company operations, be aware of governmental regulations, company policy and legal requirements affecting retention and destruction of various records but most importantly he must have the full backing of management so that the program can be implemented effectively.

(*To be concluded in September*)



▲ NEW LUMINAIRES

These Polaris luminaires are the product of the Mitchell Mfg. Co., 2525 Clybourn Ave., Chicago. They have translucent plastic sides and a Penticore Prismatic glass shield and are available in four-foot and eight-foot lengths in models for two or four lamps.

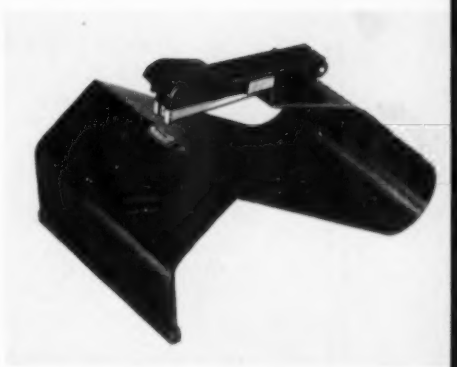
▼ PORTABLE FLOOR UNIT

Designed for buildings lacking elevators, this floor machine weighs 38 lbs., complete with 12 in. brush. It is powered by a ⅓ h.p. General Electric 115-volt AC constant speed motor and is equipped to scrub, wax, polish, and steel wool floors of all types. Brushes, steel wool pads, and buffers are available for the machine. The manufacturer is the Premier Co., 755 Woodlawn Ave., St. Paul, Minn.

New for the office

▶ POSTING MACHINE

This two-teller window posting machine is designed for unit and dual plan window posting applications requiring separate accumulations of withdrawal and deposit postings for each of two tellers. Each teller has his own lock to prevent unauthorized entries. Known as the F214 Sensimatic, it is made by the Burroughs Corp., Detroit 32.



▶ SADDLE STAPLER

Booklets of up to 128 pages can be stapled with this No. B8S saddle stapler recently introduced by Bostitch, 1019 Mechanic St., Westerly, R. I. The curve in the back of the base permits wide pages to roll up; pages up to 12 inches in width can be stapled.

▶ INSULATED FILE

One-hour fire protection for vital records is designed into this new Diebold Insulated File. Drawers are removable and fully extendable, and each compartment is fully insulated. The file carries the Underwriters' Laboratories Class "C" Insulated Record Container Label. The unit is made by Diebold, Inc., Canton 2, Ohio.

A pictorial exposition of the
1954 "Office of the Year" Award-winning offices
to appear in the

NOVEMBER 1954

Annual *Office of the Year* issue

OFFICE MANAGEMENT'S14,053* progressive management executive subscribers will be intensely interested in this pictorial and descriptive exposition of the six award winners for 1954. Details will be shown covering plans and specifications for construction, decoration and equipment layout.

MANUFACTURERS:

Forward-looking executives who constitute OFFICE MANAGEMENT'S circulation are always thinking modernization. Your advertisement in the November issue with its pictorial review of these outstanding offices will generate interest in whatever you have to offer for remodelling, refurnishing, redecorating and construction.

Advertisers of every conceivable product or service connected with construction, fixtures, lighting, decorating, furniture, systems, office machines and equipment can stimulate purchases by progressive management executives representing this highly potential office market. Not only is your advertising message in the "Office of the Year" Issue very timely, it has lasting value too, since a large number of executives retain this issue for frequent future reference.

Reserve your advertising space today to be sure of good position.

CLOSING DATES:

Set copy October 1st.
Complete plates, October 5th.

**Net Paid Circulation May 1954, Subject to A. B. C. Audit*

OFFICE MANAGEMENT

The Magazine for Management Executives

212 FIFTH AVENUE, NEW YORK 10, N. Y.

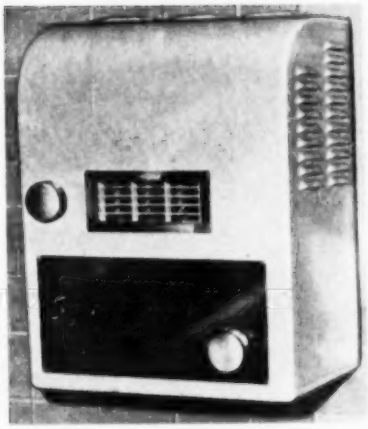
Published by Geyer Publications, Established 1877. Publishers of the most complete publishing service in the office equipment and stationery industry.

▼ MAGNETIC TAPE SPLICER

This model TS-4 cutter-splicer for magnetic tape cuts rounded indentations in the tape edges in order to leave the edges free of adhesive. It is made by Yale Industries Corp., 82-09 241st St., Bellrose, N. Y.

▲ LETTER FOLDER

The Jiffi-Fold letter folder was created by the Blankenhorn Co., Inc., 900 S. Wabash, Chicago, to simplify the job of folding letters. The guides hold the letters in position so that a simple press on the mechanism folds them neatly into three equal parts.

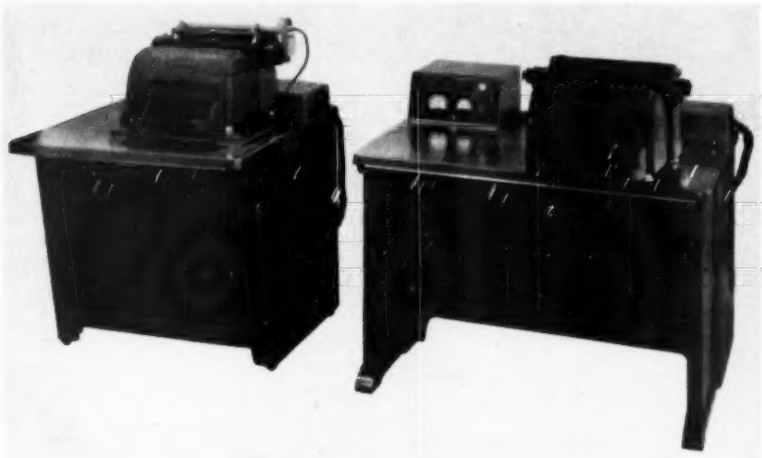


▶ TAPE RECORDER

The newest Ampro tape recorder is called the Hi-Fi Two-Speed. It operates at a tape speed of either 3¾ or 7½ inches per second, the former giving up to two hours of playing time, the latter offering higher fidelity. It is made by the Ampro Corp., 2835 N. Western Ave., Chicago.

▶ CHANGE-COMPUTING UNIT

This cash register has an unusual new feature—it computes change. Equipped with the customary keys which itemize the details of a transaction, it also calculates sub-totals, shows refunds, discounts, etc., computes a net total, and, after an entry of the amount offered by the customer, computes his change. The manufacturer is The National Cash Register Co., Main & K Sts., Dayton, Ohio.



◀ NEW TYPE HAND DRIER

A new principle of heating makes it possible for the Steri-Dri Electronic Towel to provide hot, dry air instantaneously at the touch of a button, although it has no heating coils. It is made by the Electronic Towel Corp., 342 Madison Ave., New York.

◀ TYPEWRITER NETWORK

Electric attachments convert standard electric typewriters so they can send and receive when interconnected with similarly equipped typewriters. This arrangement is called Cable-Typist. Converters, made by the American Automatic Typewriter Co., 614 N. Carpenter St., Chicago, can be switched off to allow use of typewriter as a standard machine.

▲ OFFICE CABINET

This is one of the new line of Steel-Pride office cabinets recently introduced by the Steel Service Mfg. Co., Steubenville, Ohio. The line features "Jet-Lok" construction in which the front, sides, and back of the cabinet slide together to form interlocking joints along the entire length of the joint. A "U-turn" type of joint is used. The manufacturer states that this type of construction reduces assembly time by half and that it gives extra strength and rigidity. The line includes cabinets of many sizes, including wardrobes.

▲ COIN HOLDER

For use in bank and in saving and loan windows not equipped with automatic coin changers, Metal Products Engineering, Inc., 4000 Long Beach Ave., Los Angeles, has produced this new coin holder. It is known as the model MP and is designed to hold nearly two complete rolls each of pennies, nickels, dimes, quarters, and half-dollars. It also has slots for ten silver dollars.

▼ MACHINE DESK

This single pedestal calculating machine desk is made by the Berger Mfg. Div., Republic Steel Corp., Republic Bldg., Cleveland. The desktop measures 60 by 30 inches and the writing surface is covered with linoleum. The desk is of steel and has stainless steel trim. In addition to the drawers in the pedestal, it has a concealed center drawer in the top.

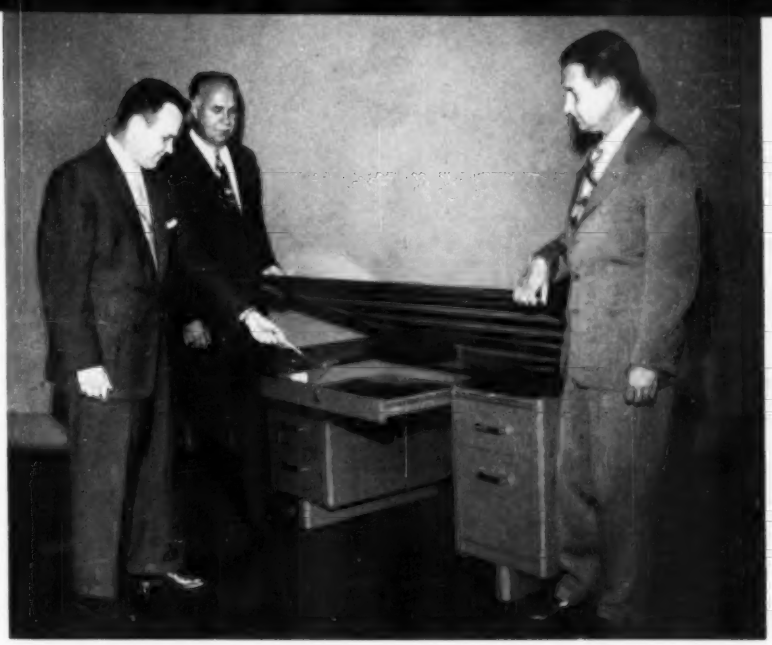
▼ CARBON PAPER BOX

This "copy holder" is actually a carbon paper box. When the box is opened, a hinged copy holder folds out from under the lid and locks into upright position. This novel design was introduced by the Manifold Supplies Co., 19 Rector St., New York.

▲ PLASTIC CHAIR

This swivel chair has a base made of Bakelite phenolic plastic, which is designed to be tough and durable, yet to be smooth so that there is no danger of snagging hosiery on it. The chair frame is of welded steel. The seat is adjustable in height, and the back rest can be moved up or down, in or out. The chair is made by the Dependable Mfg. Co., P.O. Box 211, Omaha; the plastic by the Bakelite Co., 260 Madison Ave., New York.

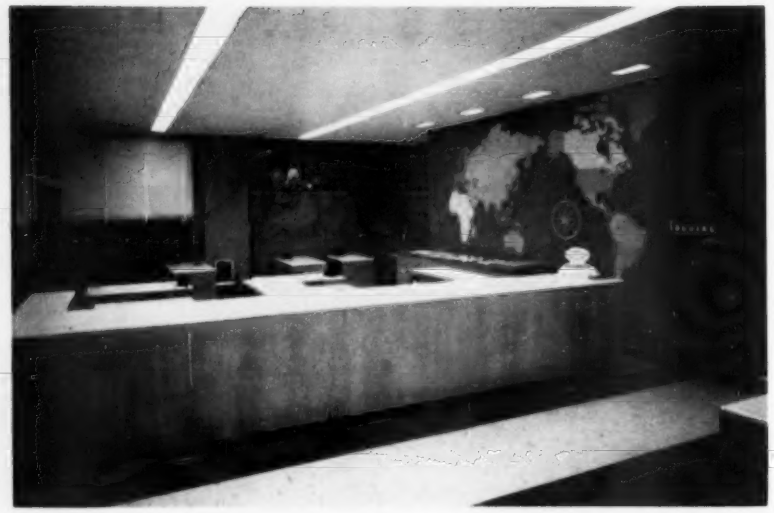
News pictorial



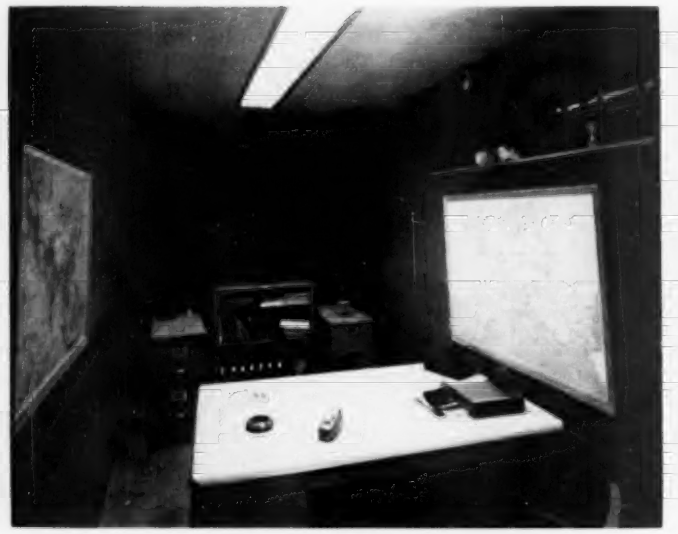
▶ The first desk in a new line stands up for inspection. Giving their new product an examination are, from left to right, Robert W. Sprott, general sales manager, R. Herman Hammer, president, and Elmer G. Rahe, vice president, all of The Globe-Wernicke Co., Cincinnati 12. The desk is one of the metal "Streamliner" series.

◀ Student engineers from Weber Junior College, Ogden, Utah, observe an assembly line inspection at the plant of the Clary Multiplier Corp., San Gabriel, Calif. From left to right are Rudy Cologna, Robert Davis, Los Angeles Chamber of Commerce domestic trade commissioner, William Paxton, Max Anderson (at rear), Edward St. Clair, and Elliot Rich, engineering instructor. The group was part of 30 student engineers and members of the Engineer Club of the college who visited twelve types of industrial factories and installations during a four-day field trip to Southern California.

▶ A handicapped war veteran receives a visit from Secretary of Labor James P. Mitchell at the President's Exposition and Parade of Progress on Rehabilitation and Employment of the Handicapped. Seated is George Seal, a World War II veteran. Mr. Seal has but one arm, but he developed considerable skill working with 10-key adding machines and calculators at the exhibit. At the right is Sender Jaari, sales manager for Facit, Inc., 500 Fifth Ave., New York, U. S. distributor of Swedish-made Facit calculators and Odhner adding machines. The interview took place in the Facit booth.



The four pictures on this page show the new offices of the Hoosier Motor Club in Indianapolis, where travelers come for maps, folders, tour planning, and other travel information. The office is constructed almost entirely of steel, with the furniture supplied by the Art Metal Construction Co. of Jamestown, N. Y. The long counter seen in the picture at the left was specially made by Art Metal to provide work stations for five travel clerks assigned to help visiting motorists with maps, brochures, and tour routings.



The picture just above is of the private office of the head of the Foreign Travel Department. At right center is a view of one of the double-compartment drawers particularly designed to hold maps; these drawers are installed in banks of six, as may be seen in the view at the immediate right. This illustration shows the long counter noted in the picture at the top of this page, except that the view is from the working area toward the visitors' space.

Tools of the Office

Adding and Calculating Machines
Dictating and Transcribing Equipment

Manufacturers' List on Page 58

Remington Rand's No. 99 printing calculator

Addo Machine Co., Inc.

Illustration. This page, center.

Model. No. 341E "Addo-X."

Description. An electric adding machine with ten-key keyboard. Has 10-place listing and 11-place totaling capacity. Can perform addition and subtraction and has a "Step-O-Matic" lever and minus repeat key to assist in multiplication. Can show credit balance.

Results of computation printed on tape. Printing rate, 148 cycles per minute.

Dimensions: width, 9 in.; depth, 15¼ in.; height, 8¾ in.

Price. Machine can be rented for $15 a month; purchase price not specified.

Other Models. Four manual models with listing totaling capacities ranging from 8/8 to 10/11; one of these can give credit balance. Four other electric models of similar capacities, plus an electric model with shuttle carriage.

R. C. Allen Business Machines, Inc.

Illustration. Next page, top.

Model. No. 1015 "Vis-O-Matic."

Description. An electric adding machine with full keyboard. Has 10-column listing capacity and 10-place totaling capacity. Equipped to perform addition, subtraction, and "motorized" multiplication. Direct subtraction prints in red. Has non-add and correction keys. Gives automatic totals and subtotals.

Results printed on tape, which automatically spaces to "tear off" position when totaling. Paper knife is transparent, so printed figures can be seen during computations. Automatic

Clary Multiplier's No. 107.01

Marchant's No. 8EFA "Figuremaster"

"Addo-X" No. 341E

Victor's No. 70-85-54 AT

National Cash Register's No. 11KN

Precisa's No. 111

R. C. Allen's No. 1015 "Vis-O-Matic"

Barrett's No. B192E

Burrough's No. P204

Friden's model AB

"clear" signal prints with first item entered in machine to show machine was clear before item was entered. Zeros print automatically. Visible answer dials show accumulated total at all times.

Key tops for odd numbers are more concave than those for even numbers, to improve operator accuracy. Several keys can be depressed simultaneously. Machine can double or single space.

Computing rate, 120 cycles a minute; printing rate also 120 cycles a minute.

Dimensions: width, 10 in.; depth, 13 in.; height, 7½ in.

Price. Not specified; machine can be either purchased or rented.

Other Models. A line of manual and electric models with listing totaling capacities ranging from 7/7 to 10/10. Manual models similar to electric versions, but do not have motorized multiplication and subtraction or automatic total and sub-total. In addition, the company offers a ten-key manual machine.

Barrett Adding Machine Div., Lanston Monotype Corp.

Illustration. At left.

Model. No. B192E.

Description. An electric printing calculator with ten-key keyboard. Listing and totaling capacities, 9 places each. Performs addition and subtraction; also multiplication, by means of automatic shift and multiply key, and direct division, using visible adding wheels.

Results printed on tape; visible adding wheels give running sub-total of calculations and make it possible to use machine even should paper run out. Machine gives automatic totals and sub-totals. Has one-position back spacer, non-add, non-print, repeat, and correction keys, column indicator and column numbers. Also has predetermining decimal pointer for multiplication and division.

Computing and printing rates each 160 cycles per minute.

Dimensions: width, 7 in.; depth, 13 in.; height, 7½ in. Weight, 17 lbs.

Other Model. Model B-192 is similar, slightly smaller, and is hand operated.

Burroughs Corp.

Illustration. Left, center.

Model. No. P204.

Description. An electric adding machine with full keyboard. Has 10-place listing and totaling capacities. Performs addition, subtraction, and automatic multiplication. Also provides credit balance, and can be used to prepare customer statements, deposit tickets, remittance advices, and other forms which can be made narrow enough to fit the machine.

Results are printed on tape. Totals and sub-totals printed at the touch of a key without using motor bar. Tape spaces automatically to tear-off position when machine totals, if desired. Paper blade is transparent to permit view of figures on tape beneath. Spacing adjustable; items may be spaced from one to five lines apart.

Machine can be easily equipped for hand operation in case of power failure. Case is readily removable to simplify ribbon changes.

Dimensions: width, 10 in.; depth, 15 in.; height, 10 in.

Price. Models range from $120 to about $800, depending on capacity and features. Machines are not rented.

Other Models. A wide line, ranging from a 7-column manual machine to a 13-column multiple-total adding-subtractor which can provide as many as four separate totals. Also a new ten-key model.

Clary Multiplier Corp.

Illustration. Preceding page.

Model. No. 107.01.

Description. An electric adding machine with full keyboard. Has 8-place listing capacity, 9-place totaling capacity. Performs addition, subtraction, automatic multiplication, and semi-automatic division. Also computes credit balances. Results printed on tape.

Add bar placed for thumb operation; keyboard designed to fall under the span of the hand. Control bars fully motorized, and machine as a whole engineered for quiet operation.

Computing rate, 190 cycles a minute; printing rate also 190 cycles a minute.

Dimensions: width, 9 in.; depth, 14 in.; height, 7 in.

Price. Clary models range upward from $144.50, depending on size and capacity.

Other Models. A wide line of machines, varying in capacity and features.

Curta Calculator Co.

Illustration. Page 40.

Description. A small manually operated calculator about the size of a fist. Construction is unusual; machine is cylindrical in shape, and figures are en-

tered on a modified keyboard equipped with dials.

There are two models; No. 1 has 8-place listing, 11-place totaling capacity, and No. 2 is designed for 11-column listing, 15-column totaling. Results shown on dials.

Overall dimensions, 2½ by 2½ by 3½ in. Weight, 12 oz.

Price. $142. Machine can be rented for $15 a month.

Facit, Inc.

Illustration. Following page.

Model. NTK.

Description. A hand-operated portable calculator with ten-key keyboard. Listing and totaling capacities, 9 by 8 by 13. Equipped to perform addition, subtraction, multiplication, and division.

Results shown on dials. Two other sets of dials provided; one shows multiplicand entered in machine, other shows multiplier; errors can be corrected before computation. Setting, tabulating, and operating controls clearly visible.

Machine is of Swedish manufacture, made of Swedish steel, with parts enclosed to protect them from dust and moisture. The manufacturer claims exceptional durability for this machine. Designed for use where portability is a requirement or where electrical supply is unavailable or undependable. Equipped with traveling case of flexible plastic.

Dimensions: width, 11¾ in.; depth, 7¼ in.; height, 5⅞ in. Weight, 12 lbs.

Price. $199.50, including traveling case.

Other Models. A line of ten-key calculators, both hand and electric, with listing/totaling capacities up to 10 by 10 by 19. Model ESA-O can perform fully automatic multiplication and division, positive and negative.

Felt & Tarrant Mfg. Co.

Illustration. Following page.

Model. No. 992 "Comptometer."

Description. An electric machine with full keyboard. This model available with listing capacities from 8 to 12 and totaling capacities from 9 to 13. Performs addition, subtraction, multiplication, and division.

Results shown on dials; dials counterbored to reduce glare and shadows. Dials are blank except for answer figures; in other words, no ciphers appear in front of answer. The manufacturer states that this machine has a computing rate of 600 cycles a minute.

Dimensions: length, 13⅜ in.; height, 6 in.; width varies from 9¾ in. for the 8-column model to 12-11/16 in. for the 12-column unit.

Prices. For the 8-column model, $640; for the 10-column model, $752; for the 12-column model, $864, including excise tax. Machine can be rented for $20 a month.

Other Models. A non-electric model in three sizes corresponding to the three versions of No. 992, plus a five-column manual unit. Also "dual-action" models, both electric and manual, which permit the operator to calculate on the right half of the keyboard and accumulate results on the left half or, at the flick of a lever, to use it as a standard full-keyboard machine. Special models also offered, including a "two-dial supertotalizer" and a 20-column model.

Friden Calculating Machine Co., Inc.

Illustration. Opposite page, bottom.

Model. No. AB.

Description. An electric adding machine with ten-key keyboard. Equipped to perform addition and subtraction; also computes and prints credit balance

Did her first problem on a MARCHANT calculator at 10 a.m....
running it like an old hand by noon

No wonder the office manager is happy. He's found that anyone—with brief instruction—can turn out fast, accurate figurework with a MARCHANT calculator.

☆ Call the local MARCHANT MAN. He'll be happy to show—by a time-test run on your own figurework—that for simplicity of operation...for guaranteed accuracy...for time saving...

Any way you figure—**IT'S MARCHANT!**

The fully-automatic MARCHANT Figuremaster

MARCHANT AMERICA'S FIRST Calculators

Send this coupon

Find out how a MARCHANT calculator will help cut your figurework costs and lighten your figuring burden. Mail this coupon with your business letterhead for free...

Index to Modern Figuring by Marchant Methods . . . ☐

Descriptive literature on Marchant Calculators . . . ☐

MARCHANT CALCULATORS, INC., OAKLAND 8, CALIFORNIA Eg

Olivetti's printing calculator

Curta calculator

Facit's model NTK

Underwood's No. 10140P "Sundstrand"

with one depression of the total key. Negative balances printed automatically in red and identified with proper symbol. Listing capacity, 10 digits, totaling capacity 11.

As each entry is made on the keyboard, it appears in a window above the keys before it is printed or added. Clear signal prints automatically with first item to show machine is clear. Tape spaces automatically after totals and sub-totals. Paper tear-off blade is transparent.

Keys in center row have concave surfaces to simplify touch operation. Large cipher key relocated at left of numeral keys.

Dimensions: width, 8¾ in.; depth, 16 in.; height, 8½ in.

Price. $380, plus taxes. Can be rented for $15 a month.

Other Models. A special version of this machine, adapted to punch selected data into five-channel punched tape has recently been introduced. (For picture, see June issue of *Office Management*, page 39.) This machine specifically designed for use in integrated data processing using punched tape as the "common language" between machines.

Friden also manufactures a line of fully automatic calculators.

International Business Machines Corp.

IBM manufactures an extensive line of equipment designed to perform various adding and calculating functions. Much of this equipment derives its input from punched cards or tapes, and it punches the results of calculation into similar cards or tapes. Since it performs more functions than calculation, this type of equipment is described elsewhere in the "Tools of the Office" series. The reader is referred, for example, to the survey of bookkeeping and accounting machines in the June issue, which includes a description of the IBM Type 604 Electronic Calculating Punch.

Lightning Adding Machine Sales Co.

Illustration. Below, left.

Model. Lightning desk model portable adding machine.

Description. An unusual type of adding machine, light in weight and operated manually by turning a metal stylus in a series of dials, somewhat in the manner of dialing a number on a telephone. Seven dials are provided, giving a listing total of seven places. Results appear in dial form, with a totaling capacity of seven digits. Answer dials cleared by a flick of a lever. Machine capable of both addition and subtraction.

Dimensions: width, 14 in.; depth, 4 in.; height, 2 in. Weight, about 1½ lbs.

Price. $14.95, list.

Marchant Calculators, Inc.

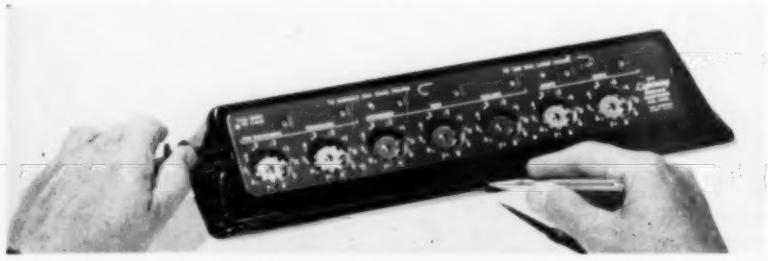
Illustration. Page 37, top right.

Model. No. 8 EFA "Figuremaster."

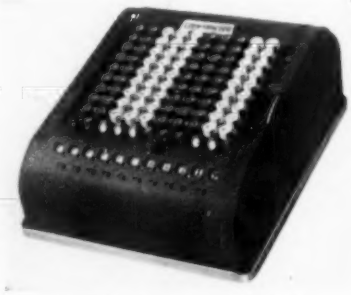
Description. An electric calculator with full keyboard. Capacity 8 by 8 by 16. Equipped to perform addition, subtraction, automatic multiplication, and automatic division. Automatic multiplication accomplished simultaneously with entry of multiplier factor. Can perform positive, negative, and accumulative multiplication or division. Has optional carriage shift; multipliers can be entered forward (as read) or backward.

Has instant automatic line-up in division, with optional control when line-up is not required; upper dial cleared automatically prior to division, has automatic clear-return of carriage.

Keys can be locked in any or all columns; keys cleared with single touch of control. Machine equipped with universal tabulator to give operational flexibility without altering decimal and



Lightning's stylus-operated adding machine



Felt & Tarrant's No. 992

"packaged arithmetic"

Here's a proved way to lower figure-work costs:

Hand any business-arithmetic problem to the Olivetti Fully Automatic Printing Calculator. It performs all calculations automatically, hands back all details, plus the answer, neatly "packaged" on a printed tape.

More than 15,000 U. S. firms today use the Olivetti Fully Automatic Printing Calculator. Immediate delivery, through more than 450 dealers. Rugged dependability makes possible the lowest-priced service contract in the industry. For information, write Dept. BM, Olivetti Corporation of America, 580 Fifth Avenue, New York 36, N. Y.

olivetti

tabulation set-ups. Decimals require no changes in tabulation and decimal set-ups for variable multipliers. Automatic division decimals automatically point off all division answers.

Computing rate, 1300 cycles per minute.

Dimensions: width, 13½ in.; depth, 16 in.; height, 8¾ in.

Price. $715.

Other Models. A similar model with 10 by 10 by 20 capacity, a special model for statistical, scientific, and engineering calculation, and various other automatic and semi-automatic calculators varying in capacity and features.

Monroe Calculating Machine Co., Inc.

Illustration. Opposite page, bottom.

Model. No. CAA-10.

Description. An electric adding-calculator with full keyboard. Has 10 keyboard columns and 20 result dials. Performs the following functions: addition, subtraction, automatic division, automatic multiplication, automatic negative multiplication, automatic accumulative multiplication, automatic three-factor multiplication, automatic squaring, and automatic multiplication with constant. Provides automatic zeros and decimals.

Has "Spot-Proof" keyboard for checking amounts entered on keyboard. Other features include automatic carriage shift and positioning, multiplier non-entry, dials locks, automatic half-cent adjustment, and automatic non-repeat control.

Computation rate, 750 cycles per minute.

Dimensions: width, 9 in.; depth, 11 in.; height, 8 in.

Other Models. A total of 14 models of the adding-calculator, including hand and electric units, semi-automatic and fully automatic versions, and models with keyboards of eight and ten columns. Also a line of full keyboard adding machines in 8-, 10-, and 13-column capacities, manual and electric, with narrow and wide carriages, and a line of adding machines with ten-key keyboards.

The National Cash Register Co.

Illustration. Page 37, bottom, center.

Model. No. 11KN.

Description. An electric machine with full keyboard. Listing capacity, 10 digits; totaling capacity also 10 digits. Performs addition, subtraction, multiplication, and division. Subtractions print in red. Special feature is "live" keyboard; each amount key serves as its own motor bar, causing amount to add instantly and print; allows especially rapid multiplication and division.

Results printed on tape and shown on dials. Amounts entered appear on dials so that they may be corrected, if necessary, before calculation. Machine has automatic clear signal, automatic credit balance, automatic space-up of tape to tear-off position when totaling, and "stair-step" keyboard.

Printing rate, 135 cycles per minute.

Dimensions: width, 10¾ in.; depth, 17 in.; height, 7 in.

Price. Approximately $385; varies with model. Used machines can be rented for $12.50 per month, and half of paid-in rental during a six-month period can be used toward machine purchase.

Other Models. The company manufactures over 40 models. These include hand-operated adding machines, small electric adding machines, a two-total shuttle carriage adding machine, group and grand total and selective total duplex models, and one- and two-total desk model bookkeeping machines. The "Live Keyboard" feature can be obtained on nearly all models.

Odhner

Illustration. Opposite page, bottom.

Model. No. X-11.

Description. An electric adding machine with ten-key keyboard. Listing capacity, 10 places; totaling capacity, 11 places. Besides standard addition, model No. X-11-S-5 performs direct subtraction, and No. X-11-C-5 is capable of both direct subtraction and credit balance. Machine shows subtotals as well as totals.

Results printed on tape. Paper cutter is of transparent plastic, permitting view of figures on tape beneath. Machine has non-add and automatic correction keys.

Base rubber rollers at back to facilitate movement across desk or table.

Dimensions. Width, 8 in.; depth, 15 in.; height, 8 in. Weight, 26 lbs. net.

Models available for AC or DC.

This machine is made in Sweden.

Price. Of No. X-11-S-5, $291.20; of No. X-11-C-5 (machine with credit balance feature), $323.05. These figures include excise tax.

Other Models. Two similar machines with 9-place listing and totaling. One computes automatic credit balance.

Olivetti Corp. of America

Illustration. Page 40, top left.

Model. Fully automatic printing calculator.

Description. An electric printing calculator with ten-key keyboard. Performs the following functions: addition, subtraction, automatic multiplication, automatic division, automatic credit balance, accumulative multiplication, discount problems. Listing capacity, 10 places, totaling capacity, 11 places.

Results printed on tape. Computing and printing rates each 155 cycles per minute. Has separate automatic short-cut multiplication keyboard. No pre-positioning required for multiplicand. Different types used for multiplicand and quotient, to eliminate confusion. Double and triple zero keys (00 and 000) provided to speed entries of zeros. Control keys, including non-add and clearing keys, electrified. Totals, subtotals, and credit balances are printed in red.

Dimensions: width, 9 5/16 in.; depth, 16¼ in.; height, 6¼ in.

Price. $565, plus $31.08 F.E.T. Machine can also be rented.

Other Models. The Olivetti line also includes the ten-key printing calculator with wide carriage for bookkeeping uses, which appeared on page 42 of the June issue of *Office Management*.

Plus Computing Machines, Inc.

Illustration. Opposite page, top.

Model. No. 909E.

Description. An electric machine with full keyboard. Listing capacity, 9 digits, totaling capacity, 10 digits. Equipped to perform addition, subtraction, multiplication, and division.

Results show on answer dials. Computing rate, 450 strokes per minute. Has light, short keystroke, designed to prevent keyboard lock-ups.

Has Universal AC/DC motor; can be fitted with radio, TV, and appliance interference suppressors without extra charge.

Dimensions: width, 19 9/16 in.; depth, 13⅛ in.; height, 6 1/16 in. Weight, 18½ lbs.

Price. $496, plus taxes. Can also be rented at $20 per month; three months' rental applicable to sale.

Other Models. Similar models in 6-, 9-, and 12-column listing capacities; the 6-column model is hand-operated, the others are available for either hand or electric operation. Also a line of "Rapid Adders," each a keyboard having only the five lowest keys in each column, to keep the entire keyboard within hand span as an aid to touch operation; these are available with 6, 9, or 12 columns. Special models also offered.

Precisa Calculating Machine Co., Inc.

Illustration. Page 37, bottom right.

Model. No. 111.

Description. An electric adding machine with ten-key keyboard. Listing capacity, 8 places, totaling capacity, 9 places. Besides addition and subtraction, it can perform automatic step-over multiplication. Also computes credit balance.

Results printed on tape. Tear-off blade is transparent, to make all listed amounts visible. Machine has visible adding dial directly above keyboard, including decimal pointer and column indicator.

Special feature is "Recall" key which permits operator to restore last printed amount on tape regardless of previous operation; usable to correct printed errors, reverse entries, repeat listings, and restore totals. Keyboard includes choice of double and triple cipher keys or single cipher bar. Also has non-add key.

Totals and sub-totals printed in red. Backspace key provided, for correcting multiplication errors. Prints in single and double spacing. Has 1½-inch writing table behind tape.

Printing rate, 140 cycles per minute.

Dimensions: width 8¼ in.; depth, 15½ in.; height, 7 in.

Odhner's model X-11

Price. $320, plus tax. Machine can be rented.

Other Models. A line of ten-key models; manual and electric, with listing capacities ranging from 8 to 10 digits and totaling capacities from 9 to 11, at prices ranging from $149.50 to $355.

Regna Cash Registers, Inc.

Illustration. At right, center.

Model. Regna Adding Machine.

Description. A hand-operated adding machine with full keyboard. Listing capacity, 6 places. Performs addition and subtraction, can multiply, and provides sub-totals and totals.

Results printed on tape. Machine has self-adjusting paper feed; should tape be pulled out of line, this feed returns it to proper alignment.

Has correction key which clears entire keyboard. Handle designed to eliminate fatigue. Keys are specially molded.

This machine made in Bergen, Norway. Counting wheels and types made in Switzerland, other parts in Norway of Swedish steel.

Remington Rand Inc.

Illustration. Page 37, top left.

Model. No. 99 printing calculator.

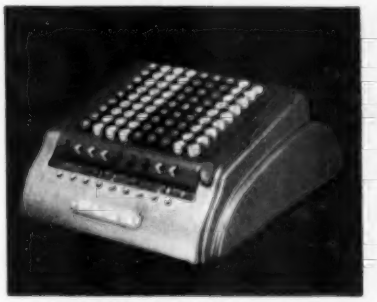
Description. An electric printing calculator with ten-key keyboard. Listing capacity, 13 digits; totaling capacity, 14 digits. Performs the following functions: addition, subtraction, automatic division, automatic multiplication, constant multiplication, accumulative multiplication, automatic credit balance.

Results printed on "Simpla-tape." All essential elements of calculation printed on the tape. Totals and sub-totals printed in red, including credit balances.

"Constant" lever permits multiplication of a given item by varying amounts without requiring the constant figure to be re-entered on the keyboard for each calculation. Total control lever permits operator to hold totals in the machine for use in computing a grand total, or to print individual totals for each multiplication. Row of ten keys at bottom of keyboard used to enter multiplier for automatic multiplication.

Machine has two-speed motor; normal printing speed is automatically stepped up for computing.

Other Models. The Remington Rand line consists of a number of models, including a ten-key electric adding machine and another with special wide



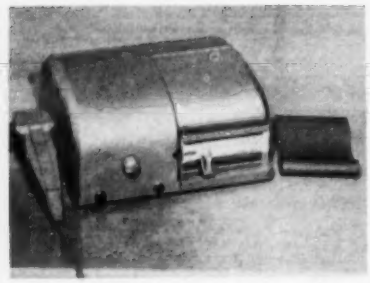
Plus Computing Machines' No. 909E

Regna adding machine

Smith-Corona's No. 8MA

Monroe's No. CAA-10

American's No. TN-2 "Rex Recorder"



Peirce Wire Recorder's No. 560

"V.P. Edison Voicewriter"

carriage and features such as automatic or manual tabulation, folio and date key. Other models vary in size and capacity.

Smith-Corona Inc.

Illustration. Preceding page.

Model. No. 8MA.

Description. A manual adding machine with full keyboard. Listing capacity, 7 digits; totaling capacity, 8 digits. Performs normal adding machine functions

Results printed on tape; roll is visible through window above keyboard.

Computing rate, 130 cycles per minute; printing rate also 130 cycles per minute.

Dimensions: width, 8½ in.; depth, 14⅛ in.; height, 7 in.

Price. Purchase price not specified; machine may be rented for $7.50 per month.

Other Model. No. 7MA is similar, but with a listing totaling capacity of 6/7.

Underwood Corp.

Illustration. Page 40.

Model. No. 10140P "Sundstrand."

Description. An electric adding machine with ten-key keyboard. Listing and totaling capacities, each 10 digits. Equipped to perform addition, subtraction, repeat addition, repeat subtraction, multiplication either left to right or right to left, automatic credit balance, short-cut multiplication, and division.

Results printed on tape. Computing and printing rates, each 150 cycles per minute. Machine has electric correction key.

Other Models. The Underwood Sundstrand line is extensive. The model illustrated is available in sizes ranging from 8- to 13-column capacities. In addition, the company offers a variety of manual and portable electric adding machines, duplex adding machines, portable posting machines, adding tabulators, and printing calculators, at prices ranging from $175 to $915.

Victor Adding Machine Co.

Illustration. Page 37, right center.

Model. No. 70-85-54 AT.

Description. An electric machine with ten-key keyboard. Listing capacity, 10 places; totaling capacity, 11 places. Capable of performing addition, subtraction, repeat addition, multiplication by repeat addition, short-cut multiplication, and division by use of reciprocals.

Results printed on tape. Machine has "Select-O-Matic" totaling, which permits operator to obtain total or subtotal by the use of the add bar as well as of the dual total key.

Computing rate, 170 cycles a minute; printing rate also 170 cycles a minute.

Has an aluminum case. Total weight, 19½ lbs.

Dimensions: width, 9½ in.; depth, 13¾ in.; height, 7¼ in.

Price. $385. Machine may be rented for $15 a month.

Other Models. A line of ten-key and full keyboard models, varying in size and features. Prices range from $109.50 to $525.

Miles Reproducer's model LC

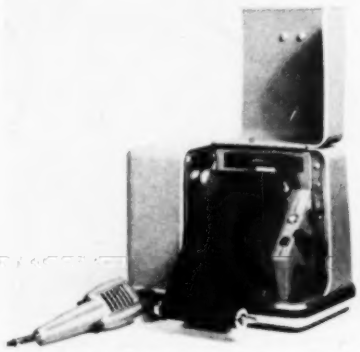
Dictating, Transcribing Equipment

Dictation equipment in common use today can be considered as falling in one of three categories: (1) combination units which serve both for dictation and transcription, (2) pairs of units, one used for dictation, the other for transcription, and (3) network systems, in which dictating units, usually of the telephone type, are connected with a central recording station where dictation is received from a variety of sources and is transcribed by a "pool" of one or more typists.

In offices making considerable use of dictating equipment, it is customary to use equipment from either the second or third of these categories. An executive will normally have a dictating or combination unit, his secretary a transcribing unit. If a secretarial pool system is used, however, the executive may have a dictating unit connected to a central recording station instead.

Combination units are used most effectively by those who can dictate all their letters at one time and can do without the instrument while the secretary takes it to transcribe the letters.

The preponderance of combination units appearing in this survey should



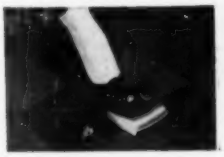
Felt & Tarrant "Dupli-Voice" model

Cannot disarrange the hair . . . High fidelity combination headset . . . Stethoscope, magic ear . . . in one unit.

Simplicity of operation . . . merely press "talk" lever and the machine is prepared to receive message

Easy to carry . . . The Rex Recorder weighs only 16 lbs. (20 lbs. with case), and is a compact 13" x 10½" x 6".

Convenient to operate . . . Floor control unit . . . stop, start and repeat . . . operated with one foot.



The Rex Recorder can increase the speed of your work and provide you with a restful atmosphere.

Rex Recorder

THE FINEST DICTATING MACHINE MADE TODAY!

REX RECORDER BEGINS . . . WHERE OTHER DICTATING MACHINES LEAVE OFF. CHECK THESE FEATURES WHEN BUYING . . .

Magnetic recording is erasable, therefore disc is re-usable 10,000 times or more and spot corrections can be made by dictating over mistakes. Simplicity of construction, no turntable, few parts and fixed recording head makes for repair-free operation.

DICTATING UNIT
(complete with microphone)
265.00

TRANSCRIBING UNIT
(complete with choice of head set and foot-pedal)
265.00

COMBINATION UNIT
(completely equipped for use as a dictator or a transcriber)
300.00

Plus Local and Federal Taxes

The Rex Recorder is the finest dictating machine application of the magnetic principle of recording. By simply speaking into the microphone your voice is electronically recorded on a plastic disc. The same machine can be used for the dual purpose of dictation and transcription. It is the perfect dictating machine, low in price, high in quality, sturdy, free from breakdown and economical to use.

All True Dictating Machine Features . . .

1. **Immediate access to all parts of recording.**
2. **Perfect marking of length of letters and corrections.**
3. **Word, phrase or sentence backspacing.**
4. **Starting and stopping without clipping of words or noise interference.**

Please send for Literature or ask for a demonstration in your office. You will be convinced of its many advantages.

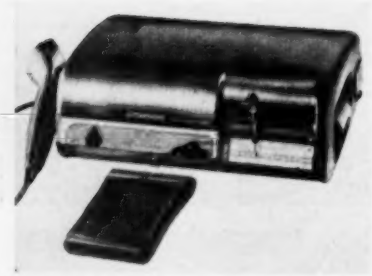
Dealerships Now Available . . . Contact Us Immediately For Further Information

EXCLUSIVE NATIONAL DISTRIBUTOR

AMERICAN DICTATING MACHINE COMPANY INC.

65 Madison Avenue, New York 16, N. Y. · MUrray Hill 4-3554

Established 1923



Dictaphone's "Time-Master-5"

SoundScriber dictating unit

Magnetic Recording's No. 77

Webster-Chicago's No. 228

Scribe's "AutoScribe"

not be taken to indicate a similar preponderance of such units in actual use. Most manufacturers make equipment of all categories, and the combination units were selected for presentation in this feature chiefly because space did not allow publication of more than one picture for each company.

Tape recorders are not listed, except where modified for transcription.

American Dictating Machine Co., Inc.

Illustration. Page 44, top left.

Model. "Rex Recorder" Model TN-2. ("Magic Eraser" Dictating System.)

Description. A combination dictating and transcribing unit which records on a magnetic disk. Magnetic recording permits erasure of unwanted material by merely redictating over the material that is to be removed; thus corrections are made by backspacing and dictating the correct information. This property makes it possible to use the disks 10,000 or more times. Maximum recording time on disk at one use, 10 min.

Unit has both loudspeaker and headset. Microphone used in dictating. Signals, such as "end of letter" indications, made by marking a scaled log pad kept on desk. Unit has foot pedal.

Controls. Stop/start on cabinet, microphone, and foot pedal; backspacing, volume and tone controls on cabinet.

Dimensions: width, 13 in.; depth, 10 in.; height, 6 in.

Amplifier Corp. of America

Illustration. Page 48, bottom left.

Model. Conference Recorder, No. 580-D.

Description. A magnetic tape recorder with secretarial transcription facilities. Serves both for dictation and transcription. As with other magnetic type equipment, corrections are made simply by backspacing and redictating over material to be changed, and the tape itself can be re-used thousands of times. Model 580-D has maximum playing time of one hour, Model 580-C a maximum of two hours.

Equipped with loudspeaker and optional crystal headphones. For dictation, several types of microphones are available: a conference type, a press-to-talk type, and a concealed desk lamp type. Unit may be equipped with a special device which is activated by sound; this starts the recorder automatically at the sound of the voice and stops it five seconds after the sound ceases.

Transcribing controls placed in small control box which can be fastened to a typewriter. These controls govern starting, stopping, and backspacing. Set has volume and tone controls. Indexer used to locate any section of material on the tape and indicate length of letter or other material.

Price. Of No. 580-D, with one-hour playing time at 7½ inches of tape per second and a frequency response of from 50 to 9,000 cycles per second, $495, net. Of No. 580-C, with two-hour playing time at 3¾ inches per second and a frequency response of from 80 to 5,000 cycles, $535, net.

Other Models. The company also manufactures a line of standard and portable tape recorders.

Dictaphone Corp.

Illustration. This page, top left.

Model. "Time-Master '5'" combination unit.

Description. A combination dictating and transcribing unit which records on plastic belts called "Dictabelts." Dictabelts have a maximum recording time of 30 minutes. They are used once; price of a Dictabelt is four cents.

Machine is equipped with microphone, headset, and foot pedals.

Controls. Start/stop and immediate playback controlled from hand microphone when unit is used for dictation; start/stop and backspacing operated by foot pedal when unit is used for transcription; volume control and indication system are located on machine itself.

Indication system permits showing length and location of letters, together with any necessary corrections and instructions.

Dimensions: width, 12½ in.; depth, 9½ in.; height, 4½ in.

Price. From $423 to $470, including Federal Excise Tax.

Other Models. The Time-Master "5" is also available in two modifications. One of these is a dictating unit and is priced from $340 to $387. The other is a transcribing unit, also priced from $340 to $387. These figures include F.E.T.

The company also manufactures a network dictation system called "Telecord." The dictating stations are in the form of telephones equipped with controls to operate one or more central re-

Why is DICTAPHONE the dictating machine known and used the world over?

To win world-wide leadership, a company must sell superlative products, of course. But it must also give an extra measure of "service."

And so Dictaphone Corporation has done for decades. The Dictaphone TIME-MASTER dictating machine helps its users to increase—often double—their capacity to get things done. Not just in their offices—but wherever they are.

From Hong Kong or Honolulu, Haifa or Hoboken—or from your home—you can mail your recorded thinking anywhere in a standard envelope for minimum postage. That's an exclusive advantage of the sturdy, flexible plastic *Dictabelt* record.

Our travel service lends machines to customers away from home. And wherever you are, you are close to the willing help of our people and facilities in 65 countries. That includes trained service personnel so essential to the long-lived efficiency of any fine electronic instrument.

Our own horn is sounding—but it's just a soft echo of our best salesmen: customers. Just remember that Dictaphone Corporation is dedicated to helping individuals get more out of their most personal possessions: their time and their mind.

DICTAPHONE® CORPORATION · DICTATION HEADQUARTERS, U. S. A.

DICTAPHONE, TIME-MASTER AND DICTABELT ARE REGISTERED TRADE MARKS OF DICTAPHONE CORPORATION

Gray "PhonAudograph" central unit

corders. Recording at the central stations is done on Dictabelts.

Dupli-Voice Co.

See: Felt & Tarrant Mfg. Co. Felt & Tarrant has recently acquired the assets of the Dupli-Voice Co.

Thomas A. Edison, Inc.

Illustration. Page 44, top right.

Model. "V. P. Edison Voicewriter."

Description. A combination dictating and transcribing unit which records on plastic disks. Maximum recording time on disk, 30 minutes; according to the company, the disks can be reused indefinitely.

Machine has both loudspeaker and head set. Microphone used for dictation. Signal increases in intensity as audible end of disk approaches.

Controls. Start/stop (for dictation) on microphone; single master control on machine controls recording, playback, backspacing, and audio scanning; volume control on machine itself; special automatic voice control equalizes strong and soft voices; cabinet also has keys for length and correction indexing. In addition, a positive lock is provided for sustained recording and playback. Foot controls available for transcribing.

Unit designed to be portable; can be used in cars, planes, etc. On/off switch has "carry" position to hold moving parts firmly to avoid damage in transit.

Dimensions: width, 11 15/16 in.; depth, 9 7/16 in.; height, 2 7/16 in. Weight, 12 lbs.

Price. $332.50, plus Federal and local taxes.

Other Model. The Edison "Televoice" system, a telephone network dictation system in which one or more "TeleVoicewriters" (recording units) are wired to a series of Televoice telephone-type dictating stations. The Televoice stations are equipped with button controls which operate the recording units. Buttons control corrections and instant playback .Hanging up the receiver automatically indicates to the transcriber the length of the letter.

Amplifier Corp.'s No. 580-D

Felt & Tarrant Mfg. Co. (Dupli-Voice)

Illustration. Page 44, bottom right.

Model. "Dupli-Voice" No. D-10-A-5.

Description. A combination dictating and transcribing unit, recording on a magnetic belt. Since recording is of the magnetic type, a process in which new dictation erases old material, belts can be re-used indefinitely and errors are corrected merely by redictating over material to be changed. Continuous recording time on belt, 10 min.

Set equipped with both loudspeaker and headset. Microphone used for dictation; foot pedal available for transcription.

Controls: stop/start and backspacing on microphone and foot pedal; rapid advance and rapid reverse on cabinet; volume and tone controls also on cabinet. Bell rings one-half minute before reaching end of belt.

Dimensions: width, 5¼ in.; depth, 10¼ in.; height, 8¼ in.

Price. Of combination unit with microphone, foot switch, ear set, and erase bar, $392.20, plus Federal tax.

Other Models. Dictating unit only, with microphone and erase bar, priced at $365.50, plus tax. Transcribing unit only, with foot switch, ear set, and erase bar, priced at $371.20, plus tax.

Tools of the Office

The Gray Mfg. Co.

Illustration. This page, top left.

Model. "Phonaudograph" central recording unit.

Description. A central recording unit used in a network dictation system, recording on plastic disks. The manufacturer states disks can be reused more than 50 times. Maximum continuous recording time on disk, 31 minutes.

Remote dictating stations are of telephone type and are equipped with controls permitting playback, end-of-letter signals, giving of corrections and instructions to the typist, etc. Telephone equipped with light to show system is busy, and receiver gives signals to indicate end of disk one minute from end of disk.

Central recording unit has lights to show unit is busy. Blinking light indicates one minute from end of disk, and buzzer sounds if dictator hangs up during this period, or if he dictates to end. Unit also has provisions for index strip for noting instructions.

Other Models. Gray also offers a series of individual dictating and transcribing units for use as private stations. These are known by the trade name, "Audograph." Microphone used for dictation. Transcribing units can be equipped with foot pedal controls of various types or with controls mounted on typewriter at base of keyboard. Listening facilities include regular speaker and choice of optional headphones, floor stand speakers, desk speakers, etc.

Magnetic Recording Industries

Illustration. Page 48, center.

Model. No. 77 "Voice-Master Dispatcher."

To Company Librarians:

Microfilm editions of *Office Management* magazine are available to regular subscribers who find it inconvenient to store regular bound volumes because of space limitations.

The microfilm rolls are sold by University Microfilms, 313 N. First St., Ann Arbor, Michigan. Each roll covers all editions of the magazines for one year. Microfilm editions are now available for 1950, 1951, 1952, and 1953. Cost of the '50 and '51 rolls is $2.80, of the '52 film, $2.90, and of the '53 edition, $2.60.

Why more leading companies are turning to open-shelf filing

Saves Over 50% in Space, Filing Time, and 75% in Equipment Costs

More and more companies are making big savings with open-shelf filing . . . and increasing their filing efficiency for alphabetic, numeric and terminal digit filing systems. Here is what an executive of one prominent company says:

"Open-shelf filing has been used by our company for over 14 years. The cost of our open-shelf files was approximately 50% of the cost of file cabinets on a per filing-inch basis. We have not had one penny of upkeep cost since their installation. (The cost today would be just 25% of the cost of five-drawer file cabinets on a per filing-inch basis.)

"From the standpoint of efficiency there is no comparison between filing folders on shelves and filing folders in cabinets. When we originally studied this problem we found that most of a girl's time was spent in opening and shutting the file drawers. By actual time study we found that pulling folders from the shelves is 53% faster."

Shelves eight tiers high with a 30-inch aisle space are recommended. This arrangement will permit a saving of over 50% in space compared to five-drawer file cabinets. Here are the facts:

Saving in space—50%
Saving in time—53%
Saving in cost—75%

For more information on how shelf filing can reduce your costs and increase your filing efficiency, send for free copy of booklet "Shelf Filing" LBV626. Write to Remington Rand, Room 1814, 315 Fourth Avenue, New York 10, N.Y.

Remington Rand INC

PROFIT-BUILDING ***IDEAS*** FOR BUSINESS

Key Production Unit

Engineered for greater work output

STREAMLINER DESK

47 DIFFERENT DESKS IN ONE—engineered to give custom-fitted service to every kind of executive or staff office function.

VARYING requirements of administrative, financial, sales, personnel, or production executives are as readily accommodated as the complete range of specialized staff operations, from secretarial to clerical duties.

1. Pedestals provide the facilities needed by the individual worker.

2. Pedestals are interchangeable.

3. Drawers may be fitted with a wide range of functional aids—letter or legal files, card files, document cases.

4. Convenience tray, center drawer, preserves order among small supplies and accessories.

5. Automatic positive locking mechanism.

6. Drawers ride smoothly, quietly, on Nylon glides; deep file drawer has progressive roller suspension.

7. Choice of standard colors and new decorative tones; two-tone effects if desired.

8. Legs or island bases; height adjustable.

9. Sound-insulated.

10. Typewriter models have new G/W Arc-Swing mechanism—for ease, speed, efficiency.

DEMONSTRATE these features to yourself; find your dependable G/W dealer in your classified 'phone book, listed under "Office Equipment." Business request brings prompt information—Dept. 7-OM.

GLOBE-WERNICKE

Engineering Specialists in Office Equipment, Systems and Visible Records

Cincinnati 12, Ohio

Tools of the Office

Description. A combination dictating and transcribing unit which records on magnetic disks. As in other systems using magnetic recording, old material is erased by dictating new material over it. The disks can thus be reused indefinitely and corrections are made simply by dictating correct material over the incorrect items. Maximum continuous recording time on disk, 30 min.

Unit has both loudspeaker and headset. Microphone used for dictation; foot pedal provides controls for use in transcribing.

Controls: stop/start and backspacing on microphone and foot pedal; volume and tone on cabinet.

"Magic-Discs" loaded like phonograph records. Magnetic needle aligns itself automatically in record groove. Indexing accomplished by using "Ind-X-Matic" pencil to mark letter length and other instructions directly on the disk; marks are easily wiped off when disk is to be reused. Unit has end-of-record warning buzzer.

Machine designed to be portable without requiring a carrying case; has cover and retractable handle.

Dimensions: width, 11 in.; depth, 10 in.; height, 4½ in. Weight, 12 lbs.

Price. $245, list.

Other Models. No. 77-T, the "Companion," a transcribing unit only; No. P-3-X, the "Magneticon," a magnetic disk recorder and three-speed phonograph combination, and No. VM-938, a telephone pick-up to record telephone combinations on a Voice-Master or other unit.

Miles Reproducer Co., Inc.

Illustration. Page 44, bottom left.

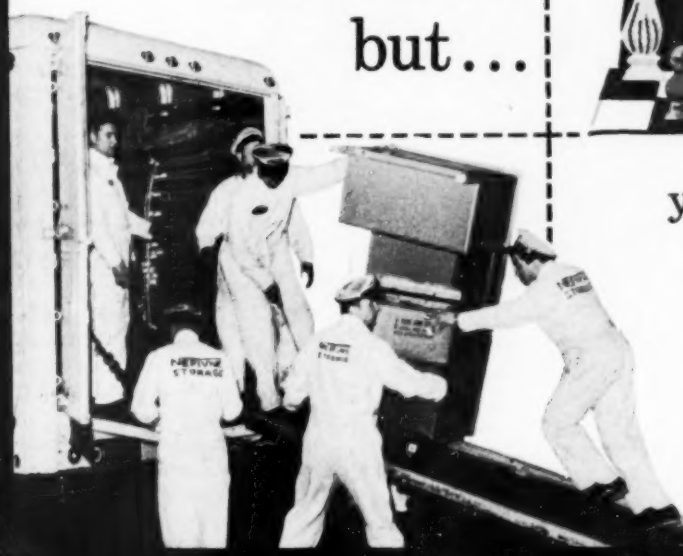
Model. "Walkie-Recordall" Model LC.

Description. A combination dictating and transcribing unit, recording on plastic belts called "Sonobands." Maximum continuous recording time, 90 minutes; belt, however, is reversible and can record a total of 180 minutes. Belt not reusable.

Unit is portable and is battery-operated. Equipped with loudspeaker and headset. Microphone used for dictating. Foot pedal available to aid in transcribing.

Controls: stop/start on cabinet, microphone, and foot pedal; backspacing on foot pedal; rapid advance on cabinet; rapid reverse on cabinet and foot

Some moves are hard to make but...



your office move can be easy... with Neptune!

Office moving, like chess, is an exact science. It calls for skill, experience and alert thinking. Above all, it requires meticulous planning . . . a carefully plotted campaign which calculates every contingency, leaves nothing to chance.

Neptune is uniquely equipped to offer you just such a service . . . to move your office anywhere in the city, to the suburbs, across the country! The largest movers in the East, Neptune has more trucks . . . more men . . . more equipment . . . more experience.

Neptune does more than the mechanical execution of the move. The unusual, expert **consultation service** offered by Neptune, works with you, plans with you far ahead of moving day . . . shows you how to avoid waste, avoid lost time, avoid the innumerable pitfalls which can lead to a nightmare of confusion and expensive searching for vital records.

This unmatched capacity for extra service explains why Neptune was chosen to make the General Foods move to White Plains . . . one of the largest office moves ever made. It is your assurance of satisfaction beyond your expectations.

Don't let your business be check-mated by lack of planning or know-how. Why not have the best . . . when it costs no more?

Your wisest move . . . call Neptune, NOW!

NEPTUNE STORAGE

OFFICE MOVING DIVISION

Riverside Drive at 134th St. • New York City, 31 WAdsworth 6-9500

NEW YORK CITY • NEW ROCHELLE • WHITE PLAINS • BINGHAMTON • AGENTS IN PRINCIPAL CITIES

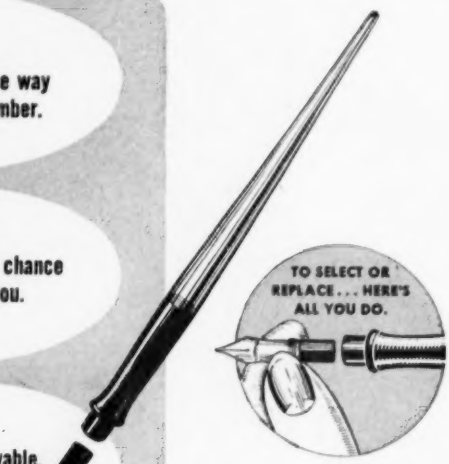
the Pen that fills itself

Fountain-base automatically fills pen every time pen is returned to socket. Pen writes full page or more at each filling.

Choose
the right point for the way you write . . . by number.

Finger grip never touches ink. No chance for ink to touch you.

Point instantly interchangeable and renewable. More than 28 point styles.



2668 *General writing*
2442 *Fine Stub*
9550 *Extra Fine*
9314B *Broad Stub*
2556 *Fine writing*
9668 *General writing*
2284 *Signature Stub*
9460 *Medium Manifold*

Fountain-base "ink-locked" against accidental spillage. Only the pen unlocks the ink.

Fountain-base holds 40 times more ink than ordinary fountain pen. Won't leak. Won't flood. Easy to clean as a saucer.

Esterbrook® **DESK PEN SETS**

THE ESTERBROOK PEN COMPANY, CAMDEN 1, NEW JERSEY
The Esterbrook Pen Company of Canada, Ltd.
92 Fleet Street, East, Toronto, Ontario
MADE IN U.S.A., CANADA AND ENGLAND

COPYRIGHT 1954 THE ESTERBROOK PEN COMPANY

Tools of the Office

pedal; volume, tone, and speed controls on cabinet.

Counter indexing provides identification of material; index numbers indicate five-second intervals. Optional start/stop device available which is activated by sound of voice; recording begins at first sound of voice and continues six to ten seconds after sound ceases.

Can be adapted to record telephone conversations by using "Telemike." Other features include groove indicator and finder, warning light to show approaching end of recording, and automatic stop when belt has been used up.

Dimensions: width, 4 in.; depth, 10 in.; height, 9 in.

Price. $350.

Other Models. Five other models, varying in size and features. Three of these can record four hours without interruption.

Peirce Wire Recorder Corp.

Illustration. Page 44, top center.

Model. No. 560.

Description. A combination dictating and transcribing unit, recording on magnetic belts. Maximum continuous recording time on belt, 15 min.; however, belt can be reused indefinitely since dictation over old material automatically erases previous material. This procedure makes possible corrections at any point on the recording by simple redictation.

Set has both loudspeaker and headset. Microphone used for dictation; foot pedal used in transcription.

Controls: stop/start on microphone and foot pedal; backspacing on foot pedal; volume and tone on microphone.

Index card used for notes and indexing of material. Warning bell rings thirty seconds before reaching end of belt.

Dimensions: width, 10 in.; depth, 10 in.; height, 5 in.

Price. $350.

Other Model. A transcribing unit is also offered, priced at $315.

Pentron Industries, Inc.

This company markets "Dictorel" dictating and transcribing equipment, which records on magnetic coated paper. Information on current models was not available at press time.

(*To page* 54)

save "time dollars" with *Leopold* office furniture

"Saved Time" turns to profits when Leopold speeds up your office procedure.

Top position file drawers save time in more efficient operation.

Ball-bearing suspension drawers open smoothly and easily—speed up service in your office.

Easy-height adjustment helps employees work *better* and *faster*.

U. S. National Bank, Bank Loan Center, Omaha, Nebraska. Leopold Installation by Orchard & Wilhelm Company, Omaha, Nebraska.

Distinctive Leopold Office Furniture saves you time and dollars in more efficient operation—cuts costly employee turnover, because people work better, are happier in pleasant surroundings. Your Leopold Dealer gives complete office planning service without extra charge. Write us for his name and address.

THE *Leopold* COMPANY

BURLINGTON, IOWA

Member: Wood Office Furniture Institute

How XEROGRAPHY (ze-rog-ra-fee) cuts duplicating costs $6,000 a year for National Gypsum Company...

COMPARATIVE DUPLICATING COSTS AT NATIONAL GYPSUM CO.			
NUMBER OF COPIES	FORMER METHOD	XEROGRAPHY	SAVING
10	1.00	.48	.52
25	2.50	.55	1.95
50	3.45	.68	2.77
100	3.90	1.00	2.90

SPEEDS PAPERWORK

National Gypsum Company, manufacturers of the well known Gold Bond building materials, cuts duplicating costs $6,000 a year. Production of a wide variety of paperwork is speeded by using paper masters prepared by xerography, instead of metal plates. Seventeen copies of a 96-page government report were completed in 8 hours.

Office forms, sales engineering drawings, laboratory tests, government reports, product specifications, are copied onto paper masters *in 3 minutes* by xerography for run off of multiple copies on an offset duplicator. Xerography is economical for runs of 10 or 10,000.

Original copy can be enlarged, reduced or reproduced same size by xerography in XeroX® Lith-Master* copying equipment which an office girl can operate. Masters can be made from one or both sides of original material.

For use in diazo type machines, translucent intermediates can be made from any original subject in the same speedy way.

There is no limit to the versatility of the dry, electrostatic, direct positive xerography process in paperwork duplicating applications.

*A TRADEMARK OF THE HALOID COMPANY

SOME USERS IN DIFFERENT FIELDS

AUTOMOTIVE
Ford Motor Company

EDUCATION
University of Nebraska

GOVERNMENT
Federal, State, City

INSURANCE
Hardware Mutuals

MANUFACTURERS
Wallace Barnes Company

TRANSPORTATION
Braniff Airways

Write for proof of performance folders showing how National Gypsum Company and companies of all kinds, large and small, are cutting duplicating costs and speeding paperwork with xerography.

THE HALOID COMPANY
54-33X HALOID STREET, ROCHESTER 3, NEW YORK
Branch Offices in Principal U.S. Cities and Toronto

XEROX

XEROGRAPHY
The fastest, cheapest, most versatile way to make masters for duplicating

Tools of the Office

Scribe Corp.

Illustration. Page 46, bottom.

Model. AutoScribe "Permoflux."

Description. A combination dictating and transcribing unit, recording on magnetic tape. As with other systems using magnetic recording, old material may be erased merely by redictating over it. This permits easy corrections, together with indefinite reuse of the tape. Tape contained in magazine, designed for instant loading.

All dictating controls located on microphone, including stop/start, record, erase, listen, lock, or fast review. Volume control on cabinet. In transcribing, typist uses foot switch to control start/stop, listen, and review. Six different types of earphones available.

Can be used to record conferences, and, using telephone pickup, can record both sides of telephone conversations.

Other Models. The line includes a transcribing unit and equipment for ues in multiple pool installations.

The SoundScriber Corp.

Illustration. Page 46.

Model. "Tycoon" dictating unit.

Description. A dictating unit which records on plastic disks. Transcribing unit (not shown) is similar in operating principle but has controls to facilitate transcription (such as foot pedal operation) and appearance and other features are somewhat modified. Maximum continuous recording time on plastic disk, 30 min.; the company says a disk can be reused 25 or more times.

Microphone used for dictation; dictation unit plays back through same microphone. Stop/start control is on microphone; other controls on cabinet.

Corrections and end-of-letter markings made directly on plastic disk.

Dimensions: width, 8½ in.; depth, 11¾ in.; height, 6½ in.

Price. $355, list.

Other Models. The transcribing unit, designed to be used in combination with dictating unit, is equipped with foot pedal controls governing backspacing and rapid reverse. It also has a speed control by which rotation speed of disk can be set anywhere from 15 to 80 rpm. It is provided with tone and volume controls and means of illuminating and magnifying correction and end-of-letter indications for easy visibility. Unit equipped with headset. The manufacturer claims a frequency

100,000

business executives... will have

better-run offices next year because they attend this year's National Business Show.

This is the one truly national show, with average attendance (by invitation only) for the last two years of 99,709.

Better than ever. This year two huge armories packed with time- and money-saving ideas. Be sure to visit both.

GOLDEN JUBILEE
NATIONAL BUSINESS SHOW

September 27 thru October 1. 1 to 10 P.M. Daily

69th REGIMENT ARMORY, 26th Street and Lexington Avenue, New York

71st REGIMENT ARMORY, 34th Street and Park Avenue, New York

Rudolph Lang, Managing Director, National Business Show
33 West 42nd St., New York 36, New York

PARTIAL LIST OF THIS YEAR'S EXHIBITORS:

AAC-Cummins
Acme Visible Records, Inc.
Addo Machine Company, Inc.
Addressograph-Multigraph Corp.
Allen Communications, Inc.
American Automatic Typewriter Co.
American Dictating Machine Company
American Photocopy Equipment Co.
American Press Association
Apeco of Canada, Ltd.
Arnot-Jamestown Corporation
Atlas Business Machines Corporation
Audograph Sales Company
Bankers Box Company
Better Packages, Inc.
The Bircher Company, Inc.
bro-dart Industries
Calculagraph Company
Certified Microfilm, Inc.
Chart-Pak, Inc.
The Cincinnati Time Recorder Co.
Collister Corporation
Commercial Radio & Sound Corp.
Connecticut Telephone & Electric Corp.
Copease Company
Copy Craft, Inc.
Cormac Industries, Inc.
Cosco Office Chairs
Ralph C. Coxhead Corp.
Cummins-Chicago Corporation
The Denominator Company, Inc.
A. B. Dick Company
Develop Photocopying Machine Co.
Dictaphone Corporation
Dupli-Voice Company
Diplomat Company of America
Eastman Kodak Company
Thomas A. Edison, Inc.
The Electrofile Corporation
Elliott Addressing Machine Company
Executone, Inc.
Felt & Tarrant Manufacturing Company
Ferris Business Equipment, Inc.
Flexifone of New York
Flexi-Trol
Fonadek Corporation of New York
Friden Calculating Machine Co., Inc.
General Binding Corporation
General Electric Company
Air Conditioning Division
General Photo Products Co., Inc.
Goodyear Printing & Stationery Co.
Graphic Microfilm Corporation
The Gray Manufacturing Company
The Haloid Company
Hamilton Manufacturing Company
Harris Seybold Company
The Heyer Corporation
Inter-Continental Trading Corporation
Itkin Brothers, Inc.
Korda Industries
The Kybernetes Corporation
Lansdale Products Corporation
LeFebure Business Equipment
Lightning Letter Opener
Lightning Letter Sealer
R. J. Ludlow, Jr.
Maggie Magnetic, Inc.
Magna-Crest Corporation
Magnetic Recording Industries
Mailers Equipment Company
Harold Mannheimer Organization
Manpower, Inc.
Marchant Calculators, Inc.
Massachusetts Indemnity Insurance Co.
J. Curry Mendes Corporation
Methods Research Corporation
Michaels Lith Inc.
Microtext Publishing Corporation
Minnesota Mining & Manufac. Co.
Monroe Calculating Machine Company
The Mosler Safe Company
New York Telephone Company
The Office
Office Appliances
Office Management & Equipment Mag.
Office Publications Company
Old Town Corporation
Olivetti Corporation of America
Ozalid
Div. of General Aniline & Film Corp.
Payroll Tax Service
Payrollmaster
Peirce Dictation Systems
Permoflux Scribe
Photo-It Company
Photorapid, Inc.
Plus Computing Machines, Inc.
Recordak Corporation
Recording & Statistical Corporation
Rex Recorder
Rite-Line Copyholder Division
Royal Typewriter Company
Safeguard Appliance Corporation
Safeguard Corporation
Safeguard International
Savasort Sorting Devices
Scribe Corporation
Self Winding Clock Company
Simplex Time Recorder Company
Soundscriber Corporation
The Stapiex Company
Stromberg Time Corporation
Sturgis Posture Chair Company
Target Products Corporation
Telecom
Thomas Collators, Inc.
Tiffany Stand Company
Times Facsimile Corporation
Underwood Corporation
Valley Industries, Inc.
Vari-Typer Composing Machines
Veeder-Root, Inc.
VISIrecord, Inc.
VISIrecord Systems
Voice-Master Sales & Service
Webster Electric Company
Widmer Time Recorder Company
R. M. Wood
Wood Office Furniture Institute

response of up to 10,000 cycles for this unit.

In addition, SoundScriber offers a network dictation system; the dictating units are of the telephone type and they are wired to a central recording station. Dictation thus recorded is transcribed in the usual manner.

Webster-Chicago Corp.

Illustration. Page 46.

Model. No. 228.

Description. A combination dictating and transcribing unit, recording magnetically on wire. Like other magnetic systems using tapes, disks, or belts, the process of recording on wire permits indefinite reuse of the recording medium. Thus, errors in dictation can be corrected merely by redictating over the erroneous material, and the wire itself can be used over and over again. Maximum continuous recording time on one spool or wire, 60 min.

Equipped with loudspeaker and headset. Microphone used for dictation, and foot pedal controls are provided for transcription.

Controls: stop/start on cabinet, microphone, and foot pedal; backspacing and rapid reverse on cabinet and foot pedal; volume control on cabinet.

Other features include a timing device which shows elapsed time.

Price: $140. Accessories extra.

Next Month:

Microfilm Equipment

Supply Cabinets

Wardrobes and Lockers

Manufacturers' List

Adding and Calculating Machines

Addo Machine Co., Inc.
145 W. 57th St., New York 19

Allen Business Machines, Inc., R. C.
678 Front Ave., N. W.,
Grand Rapids 4, Mich.

Barrett Adding Machine Div.,
Lanston Monotype Corp.
261 Madison Ave., New York

Burroughs Corp.
6071 Second Ave., Detroit 32

Calculator Equipment Corp.
Orange, N. J.

Your partner in good employee relations!

Keeping employees happy and satisfied is a vitally important part of good office management. One sure, economical way to win employee good will is with linen and towel service. Employees appreciate fluffy-soft cotton towels, snowy-white cotton table and bed linens, clean attractive cotton uniforms. The *linen supply man* brings them all... helping to promote employee morale and give greater job satisfaction.

This is LINEN SUPPLY service

You have no investment, no inventory, no maintenance. Everything is furnished and serviced by your linen supplier, at low cost. Dependable delivery and pick-up maintain a continuous supply of your exact linen requirements—large or small. Local service is listed in your classified directory under LINEN SUPPLY or TOWEL SERVICE. Call today or write to address below for free descriptive booklet.

Linen Supply

ASSOCIATION OF AMERICA

and National Cotton Council

22 W. MONROE ST., CHICAGO 3, ILL.

In any business . . . Linen Supply is Good Business

Tools of the Office

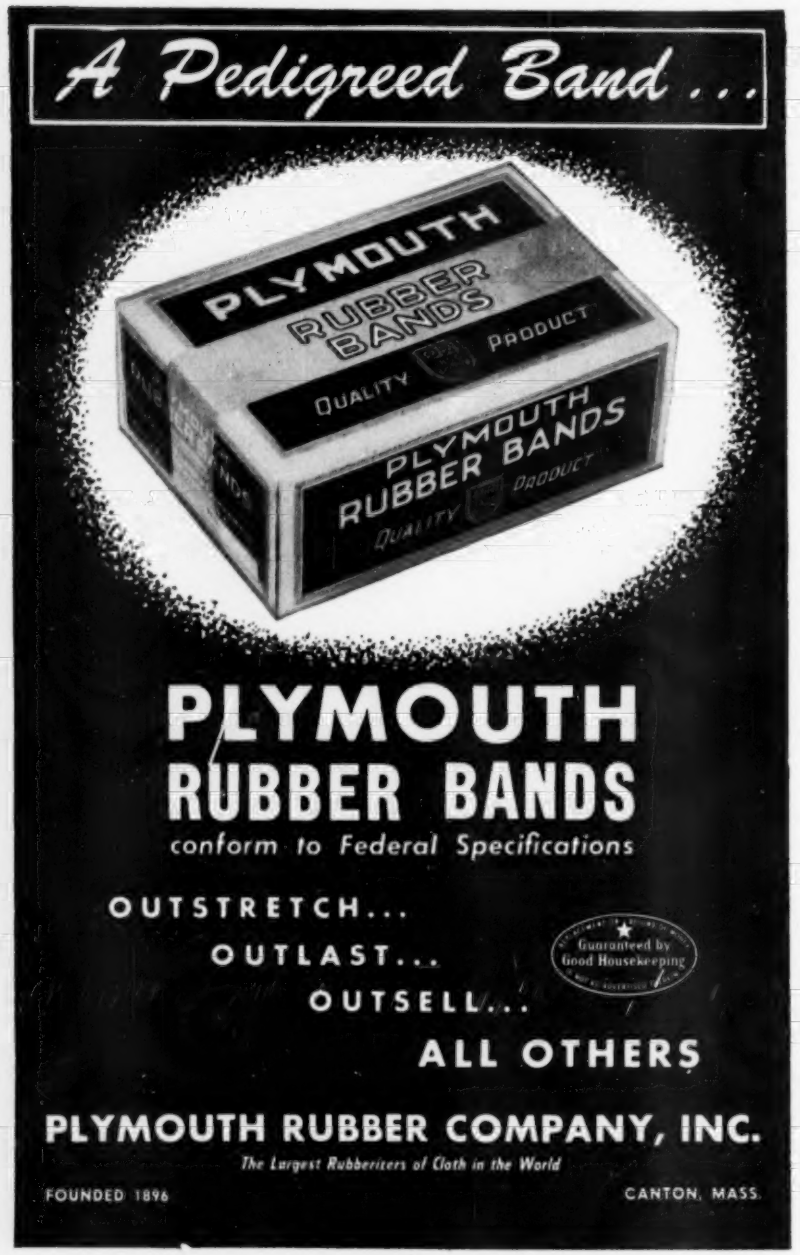
Manufacturers' List

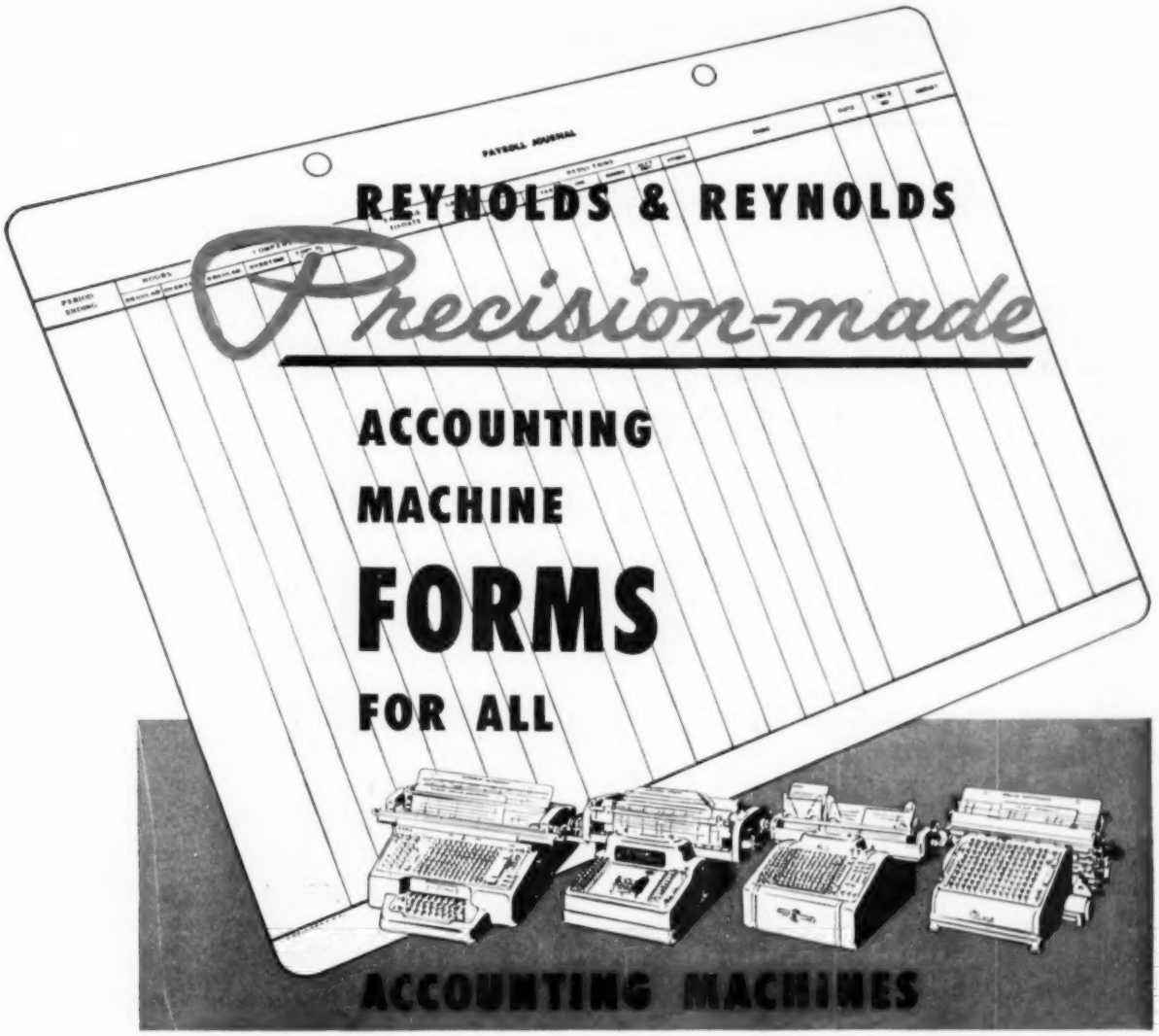
(*Continued from page 56*)

Clary Multiplier Corp.
408 Junipero, San Gabriel, Calif.
Curta Calculator Co.
3851 W. Madison St., Chicago 24
Facit, Inc.
500 Fifth Ave., New York
Felt & Tarrant Mfg. Co.
1735 N. Paulina St., Chicago 22
Friden Calculating Machine Co., Inc.
San Leandro, Calif.
Gibian Business Machines, Richard
128 Lafayette St., New York 13
International Business Machines Corp.
590 Madison Ave., New York 22
Lanston Monotype Corp.,
Barrett Adding Machine Div.
261 Madison Ave., New York
Lightning Adding Machine
Sales Co., Inc.
234 W. 37th Place, Los Angeles 7
Marchant Calculators, Inc.
1475 Powell St., Oakland 8, Calif.
Monroe Calculating Machine Co., Inc.
555 Mitchell St., Orange, N. J.
National Cash Register Co., The
Main & K Sts., Dayton 9, Ohio
Norwegian Export Council,
Norwegian American Chamber of
Commerce, Inc.
290 Madison Ave., New York 17
Odhner
c/o Facit, Inc.
500 Fifth Ave., New York
Oerlikon Tool & Arms Corp.
of America, Business Machines Div.
P. O. Box 3049, Asheville, N. C.
Olivetti Corp. of America
580 Fifth Ave., New York 36
Plus Computing Machines, Inc.
5 Beekman St., New York 38
Precisa Calculating Machine Co., Inc.
375 W. Fourth South,
Salt Lake City, Utah
Regna Cash Registers, Inc.
175 Fifth Ave., New York
Remington Rand Inc.
315 Fourth Ave., New York 10
Smith-Corona Inc.
701 E. Washington St.,
Syracuse 1, N. Y.
Sorvall, Ivan,
210 Fifth Ave., New York 10
Swift Business Machines Corp.
51 Church St.,
Great Barrington, Mass.
Underwood Corp.
1 Park Ave., New York 16
Victor Adding Machine Co.
3900 N. Rockwell St., Chicago 18

Dictating and Transcribing Equipment

American Dictating Machine Co., Inc.
65 Madison Ave., New York 16
Amplifier Corp. of America
398 Broadway, New York 13
Baltimore Dictating Machine Co.
817 E. 33rd St., Baltimore 18
Codit Co., The
See: Magnetic Recording Industries
Crescent Industries, Inc.
5900 W. Touhy Ave., Chicago 31
Dictaphone Corp.
420 Lexington Ave., New York 17
Dupli-Voice Co.
See: Felt & Tarrant Mfg. Co.
Edison, Thomas A., Inc.
51 Lakeside Ave.,
West Orange, N. J.
Felt & Tarrant Mfg. Co.
1735 N. Paulina St., Chicago 22
Gray Mfg. Co., The
521 Fifth Ave., New York 17
International Electronics Co.
808 N. Broad St., Philadelphia
Magnetic Corp. of America
756 Milwaukee, Chicago





Yes, *Precision-made* Accounting Machine Forms are an important team mate to your precision made Accounting Machines. To obtain maximum accounting efficiency you must use quality forms . . . forms that are carefully produced to fulfill your individual requirements, forms that register perfectly, and forms that are printed on the proper paper stock to withstand handling and yet give perfectly legible copies.

Team-up Reynolds & Reynolds *Precision-made* Accounting Machine Forms with your Accounting Machine for greatest accounting efficiency.

WRITE TODAY FOR COMPLETE INFORMATION!

THE REYNOLDS & REYNOLDS COMPANY

BUSINESS FORMS SINCE 1866

PLANTS: DAYTON, CELINA, OHIO; DALLAS, TEXAS; LOS ANGELES, CALIF.

OFFICES IN MOST PRINCIPAL CITIES

Tools of the Office

Manufacturers' List

(*Continued from page* 58)

Magnetic Recording Industries
11 E. 16th St., New York 3
Miles Reproducer Co., Inc.
812 Broadway, New York 3
Paramount Dictating Machine Corp.
332 Broadway, New York 7
Peirce Wire Recorder Corp.
5900 N. Northwest Highway,
Chicago 31
Pentron Industries, Inc.
664 N. Michigan, Chicago 11
Scribe Corp.
2835 N. Kedzie Ave., Chicago 18
SoundScriber Corp., The
146 Munson St.,
New Haven 4, Conn.
Webster-Chicago Corp.
5610 Bloomingdale Ave., Chicago 39

Erratum

In the May issue of *Office Management*, on page 46, the price of the modular L-shaped secretarial desk unit manufactured by the Lehigh Furniture Corp., was incorrectly given as $595. This figure should have read $383.

Robert C. Quick dies

Robert C. Quick, advertising and merchandising manager of the Reflector Hardware Corp., died on June 11th.

There's nothin' like color to stop 'em cold and get 'em reading. And there are no better colors (for stopping) than the wide range of attention-compelling hues in Eastern office duplicating machine papers. Pinks, blues, greens . . . a whole rainbow to choose from.

And whatever Eastern paper you choose, you're assured a paper that will run well, look well, have a quality feel . . . and, generally, make life easier and office duplicating work better.

Try it for whatever process you use. There's an Eastern paper especially engineered to deliver top performance and clear, clean impressions.

Eastern makes the following seven papers for office work: Atlantic Duplicator, Atlantic Bond, Atlantic Mimeo Bond, Atlantic Opaque, Manifest Bond, Manifest Mimeo Bond and Manifest Duplicator.

For sample Sheets or Packets, ask your local Eastern paper merchant or write Eastern Corporation, Bangor, Maine.

use ATLANTIC BOND Business PAPER

EASTERN

MADE BY EASTERN CORPORATION • BANGOR, MAINE

SPA announces program

(*Continued from page* 9)

the topics to be discussed: (1) What are the seven basic ways to speed up the preparation of operating statements and sales reports? (2) How can I determine which of my systems problems can be handled by punched card equipment? (3) How can I benefit *now* by the new developments in electronics business systems? (4) How can I determine what other companies have done in the area of work simplification? (5) Should I use present electronic equipment—or wait for future developments?

In addition to the basic three-day meeting, the Association will conduct 13 one-day seminars concurrently. These are entitled: Orientation in Electronics, Initiating an Electronics Program, Utilization of Present Electronic Equipment, Records Management, Work Measurement, Quality Control in the Office, Forms Design and Control, Practical Work Simplification Programs, Systems and Procedures Functions, Communications, Office Layout and Design, Operations Research, and Inventory Mechanization.

The meeting will also include a display of electronic equipment.

NRMC awards fellowships for records research

The names of winners of four $600 fellowships for research in the field of business records have recently been announced by the National Records Management Council, 50 E. 42nd Street, New York, sponsor of the fellowships. The winners are Gerald J. Glasser and Thomas Hubin, students in the Graduate School of Business Administration, New York University; Joyce B. Kidder, a former Fulbright fellow; and James H. Soltow, a graduate student at the University of Pennsylvania.

The Council, which is a non-profit organization, established the fellowships "to furnish opportunities for specialized training so that business and government would be assured of qualified people to administer their records systems and translate the results of research into practical applications for day-to-day business operations."

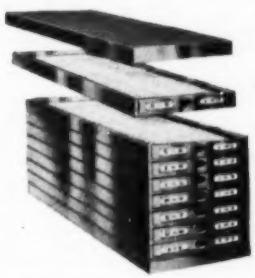
The first fellowships were made available only to students, but the Council will in the future accept applications from individuals employed in private industry or government agencies.

how to FIND THE FACTS ...when you want them

VICTOR BOOK VISIBLE

Nothing adds so much to your own personal efficiency . . . to the impression you make on your business associates . . . as having *all* the facts in any record at your fingertips. With Victor Book Visible up to 118 record items can be reviewed at a glance — the latest information pinpointed by attention-compelling signals. No matter what the record . . . sales, inventory, credit, personnel . . . Book Visible gives you surer, faster control . . . saves you time and money. Book Visible is portable too. It's ideal either for small or for departmentalized records. See it at your stationer's today!

VICTOR SECTIONAL VISIBLE



Every advantage of Book Visible is combined with the capacity to grow, section by section, in Victor Sectional Visible. Individual sections stack rigidly to any convenient height as the record expands with your business . . . you buy only what you need *when* you need it. Let your stationer show you this *exclusive*, money-saving feature of Sectional Visible today.

VICTOR SAFE & EQUIPMENT

Remington Rand Inc.
DEALER SALES DIVISION

315 FOURTH AVENUE · NEW YORK 10, N. Y.

Association News

THE RECORDS MANAGEMENT Association of New York held its annual dinner at the Savoy-Plaza on June 14th. Following the dinner, the Association's new officers were introduced. The new president is Miss H. Rosamond Hartshorn, who had been first vice president during the year 1953-54. The other officers are Miss Anna E. Brennan, first vice president; Miss Ruth A. Ramsay, second vice president; Miss Helen C. Kennedy, recording secretary; Miss Mildred E. Kinghorn, corresponding secretary, and Mrs. Viola E. Haas, treasurer.

Directors for 1954-55 are Miss Alice Johnson, Miss Charlotte L. Willuschat, Miss Mabel L. Ellsworth, Miss Doris B. Foster, and Miss Marguerite L. Stainkamp.

The speaker of the evening was Frank Hogan, public relations manager for *McCall's Magazine,* who spoke on the subject, "Of Teachers and Presidents."

A feature of the program was the presentation of a check for $956.69 to the Arthritis and Rheumatism Foundation. Edward Allen Pierce, president of the New York chapter, received the check for the foundation. The check represented the results of the Records Management Association's annual Spring Benefit Bridge Party, which is devoted each year to raising funds for a charitable cause. A year ago the beneficiary was the Damon Runyon Fund for Cancer Research, Inc.

THE NEW YORK PERSONNEL MANAGEMENT ASSOCIATION has announced that J. William Stuart will head its new executive board. Mr. Stuart, who was elected president of the association, is industrial relations director for Chas. Pfizer & Co., Inc. Other members of the board include Oscar Lasse, personnel manager of The Texas Co., and Dorothy Hyland, personnel officer of the Dry Dock Savings Bank.

switch from this

to this
Anyone can produce beautiful plastic bound books in these 2 easy steps:
Punch sheets and covers of any size or weight, quickly, accurately
Bind up to 250 books an hour with colorful GBC bindings—5/16" to 1 1/8" diameter.

NOW... YOU CAN DO
PLASTIC BINDING

THIS STRIKING PLASTIC BOUND PORTFOLIO-PRESENTATION— FREE

Get your personalized edition . . . a wealth of facts and ideas. You'll receive at no extra cost the complete application and cost story along with actual samples of modern plastic binding all in one presentation. Act now! No obligation.

GENERAL BINDING CORP., Dept. OM-8
812 W. Belmont Ave., Chicago 14, Ill.

RIGHT IN YOUR OWN OFFICE

Bind all sizes of loose pages—any printed or duplicated material with compact GBC plastic binding equipment . . . in a matter of seconds. You'll add prestige, color, utility, attention-compelling appearance and increase the effectiveness and life of your literature. Pages lie perfectly flat . . . may be inserted or removed any place in book. Save money, too. Anyone can operate.

GET YOUR FREE PORTFOLIO-PRESENTATION NOW

GENERAL BINDING CORPORATION
Dept. OM-8 812 W. Belmont Ave., Chicago 14, Ill.

Please send me . . . without obligation . . . my free plastic bound PORTFOLIO-PRESENTATION that includes prices and applications.

NAME_____

ORGANIZATION_____

ADDRESS_____

CITY_____ ZONE____ STATE____

Coming Events

American Management Association
Aug. 19-20
Briefing Session on New Tax Law
Hotel Statler, New York

•

American Statistical Association
Sept. 10-13
1954 Annual Meeting
Mt. Royal Hotel, Montreal

•

Life Office Management Association
September 27-29
1954 Annual Conference
Shoreham Hotel, Washington

•

Office Executives Association of New York
September 27-October 1
Golden Jubilee National Business Show
69th and 71st Regiment Armories
New York

•

National Institute of Governmental Purchasing
Oct. 10-13
Ninth Annual Conference and Exhibit
Hotel Statler, New York

•

Systems and Procedures Association of America
October 25-27
International Systems Meeting
Hotel Commodore, New York

HOW TO IDENTIFY A GREAT DESK BUY

You don't have to be an expert to judge desk value. Just see if the symbol "ID" appears in the middle drawer. If so, you'll know it's an Indiana Desk — and a great buy by any value standard. Because every Indiana Desk is a product of extra-good wood and expert craftsmanship . . . planned to promote most effortless user efficiency. And "ID" spells "budget-sparing," too!

A visit with your nearest Indiana Desk dealer will prove profitable indeed. Please write us for his name, now.

indiana desk co.
JASPER, INDIANA • U.S.A.

...before it TALKS

...is the way our doctors put it—"Our chances of curing cancer are so much better when we have an opportunity to detect it *before it talks.*"

That's why we urge you to have periodic health check-ups that *always* include a thorough examination of the skin, mouth, lungs and rectum and, in women, the breasts and generative tract. Very often doctors can detect cancer in these areas long before the patient has noticed any symptoms.

For more life-saving facts phone the American Cancer Society office nearest you, or write to "Cancer"—in care of your local Post Office.

American Cancer Society

Books and Pamphlets

AMA Publications

Recent reports issued by the American Management Association, 330 W. 42nd St., New York, include the following:

Building a Balanced Communications Program. This is No. 170 in the General Management Series of reports and contains papers presented at the Association's General Management Conference held in New York last March. The papers are entitled, "Communication Within Management," "Management's Relations with the Public," "Management's Relations with Employees and Their Families," "Getting the Most from Employee Benefits," and "The Evolving Picture in Labor Relations."

Guides to Modern Financial Planning, No. 104 in the Financial Management Series. It contains a report by Lawrence L. Ferguson, of the General Electric Co., called "Comprehensive Salary Planning."

Maintaining a Dynamic Insurance Program, No. 101 in the Insurance Series. Among the reports is a paper entitled "Analyzing Group Insurance Costs," by J. Henry Smith, vice president and associate actuary of the Equitable Life Assurance Society.

Each of these booklets is priced at $1.25.

A New Approach to Office Mechanization. The United States Steel Corp. has recently made available to the public an analysis of its revolutionary integrated data processing system in which standard types of business machines have been interconnected through the "common language" medium of five-channel punched tape. The system was described at a special AMA conference in New York, which was reported in detail in two articles which appeared in *Office Management* in March and April. AMA's new book contains a full description of U. S. Steel's new system. It is priced at $2.50.

The Road to Secretarial Success

A recently published book to help the secretary improve herself in her job is *The Road to Secretarial Success,* by Irene Place and Madeline S. Strony. It is published by the McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, and is priced at $3.95.

SENSATIONAL KODAK VERIFAX PRINTER

Makes 3 copies in 1 minute—less than 4¢ each

It's possible to have this speed and economy in your office now because the Kodak Verifax Printer is sensationally different . . . lets you copy letters, reports, charts, even magazine pages in a minute or less; and it gives you *at least three copies*—instead of one—from each sheet of matrix paper.

The only equipment needed is the typewriter-size Verifax Printer . . . priced for every office at a surprisingly low $240. And this is quickly made up by your savings in retyping costs alone.

Anyone in your office can make these 100% accurate, black-on-white copies after a few minutes' instruction . . . and no adjustment in your present room lighting is required.

Verifax copying saves wherever there's paper work

—MAIL COUPON NOW—

Eastman Kodak Company
Industrial Photographic Div.
Rochester 4, N. Y.

Gentlemen: Please send me free Verifax folder and names of near-by dealers.

73

Name_____

Company_____

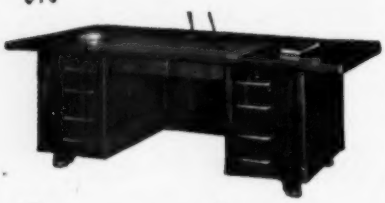
Address_____

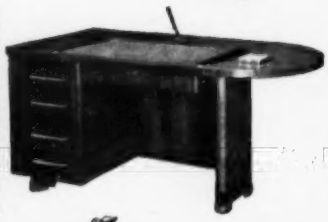
City_____ State_____

Price quoted is subject to change without notice.

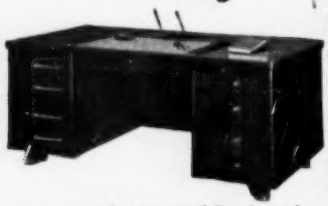
Kodak

THE METROPOLITAN GROUP





by Imperial



. . . one of many carefully planned groups of handsome, modern office furniture . . . styled to lend beauty and dignity to your office . . . with increased overall efficiency. See your IMPERIAL dealer and write us for FREE Office Planning Guide.

IMPERIAL DESK COMPANY
Evansville 7, Indiana

Books and Pamphlets
(Continued)

Dr. Place is in charge of the secretarial training and office management programs at the University of Michigan, and Mrs. Strony is educational director of McGraw-Hill's Gregg Publishing Division.

The book discusses the skills required of a successful secretary and offers advice on how to develop them. It contains numerous case histories and illustrations to show how the secretary can prepare herself for advancement into positions such as those of administrative assistant, executive secretary, personnel assistant, training assistant, and office manager. Included are analyses of the actual duties and responsibilities attached to these positions.

Brief Listings

Target: Red Tape is the title of a special report issue of the *Leahy Newsletter,* published by Leahy & Co., 337 W. 27th St., New York. It is an eight-page booklet which discusses the means of reducing paperwork by destruction of non-essential records and transfer of necessary but rarely used records to records storage centers in low-rental buildings. The booklet states that the nation's office workers turn out more than 175 billion pieces of paper annually, that the average company spends $6,200 in materials and paperwork to create, handle, and file the contents of one four-drawer filing cabinet, and that business organizations actually "hoard more papers per employee than the Federal Government."

Directory of Purchasing Agents, published by Dunhill International List Co., Inc., 565 Fifth Ave., New York, and available at a price of $50 a copy. It is a new trade directory listing over 36,000 buying sources. The names of more than 40,000 purchasing officials are also included. The book covers business, institutional, governmental, and other buying agencies.

Manufacturers' Catalogs and Pamphlets

Furniture

The Herman Miller Furniture Co., Zeeland, Mich., has published a booklet called *A Cross Section of Herman Miller Furniture,* which contains illustrations of furniture designs by George

Elliott

ADDRESSING MACHINES

offer you the only competition you can find in the Addressing Machine industry. Consult your yellow telephone book or write to The Elliott Addressing Machine Co., 145D Albany St., Cambridge 39, Mass.

•

Millions Now In Daily Use!

ACE STAPLE REMOVER

ACE PILOT

ACE STANDARD

When you order an ACE Staple Remover *you get the finest!* Its smooth, effortless performance *never fails!* Staples snap out quicker, easier, without tearing papers. Handsome plastic moldings fit your fingers. Insist on "ACE"—for TOP QUALITY Stapling Equipment . . Staple Remover, Staples, Stapling Machines.

SOLD THRU LEADING STATIONERS

ACE

Stapling Machines for Every Purse and Purpose

ACE FASTENER CORPORATION
3415 North Ashland Avenue, Chicago 13

Books and Pamphlets
(*Continued*)

Nelson and Charles Eames. The booklet is available without charge from the company.

Loose Leaf Equipment

The C. E. Sheppard Co., 44-01 21st St., Long Island City, N. Y., has prepared a booklet called *Your Directory of Loose Leaf Equipment,* which contains illustrations and descriptions of loose leaf equipment in the Cesco line. The booklet is obtainable from the company at the above address.

Spot Carbon Business Forms

Spot Carbon Products, 54 Lafayette St., New York, offers a booklet called *How to Save with Spot Carb.* The booklet discusses the uses of spot carbonizing, a process in which predetermined areas on the backs of business forms are treated with carbon, making it possible to transfer selected information, and that information only, to forms beneath by the ordinary processes of typing or writing.

People in the News

RALPH C. ALLEN has been elected chairman of the board of R. C. Allen Business Machines, Inc. Mr. Allen, who founded the company in Grand Rapids, Mich., in 1931, moves to this post from that of president.

Ralph C. Allen

K. P. Phelps, formerly executive vice president, succeeds Mr. Allen as president. As a result of this promotion, Mr. Phelps will return to Grand Rapids from his previous headquarters in New York.

It was also announced that *Henry A. Greene* was elected executive vice president and that *J. Lawrence Walker* has become vice president in charge of the Western Division, while *W. H. Ducting* has been named vice president in charge of the Eastern Division.

Other changes announced were the promotion of *John T. Carlson,* previously general manager of plant operations in Grand Rapids, to take charge of typewriter manufacturing and sales in Woodstock, Ill., and of *Lloyd E. Smith* to succeed Mr. Carlson.

MARTIN WORTMANN, JR., has been appointed executive vice president of Cormac Industries, Inc., New York, and has also been elected to the board of directors. Previously, he was assistant secretary and assistant treasurer of Ludwig Baumann & Co., and of Spear & Co.

WALTER A. HENSEL, controller of the General Aniline & Film Corp., has been named assistant general manger of the company's Ozalid Division, according to a recent announcement from President Jack Frye. At the same time, *Arthur J. Young* was elected controller to succeed Mr. Hensel.

R. P. McClanahan joins Geyer's Chicago staff

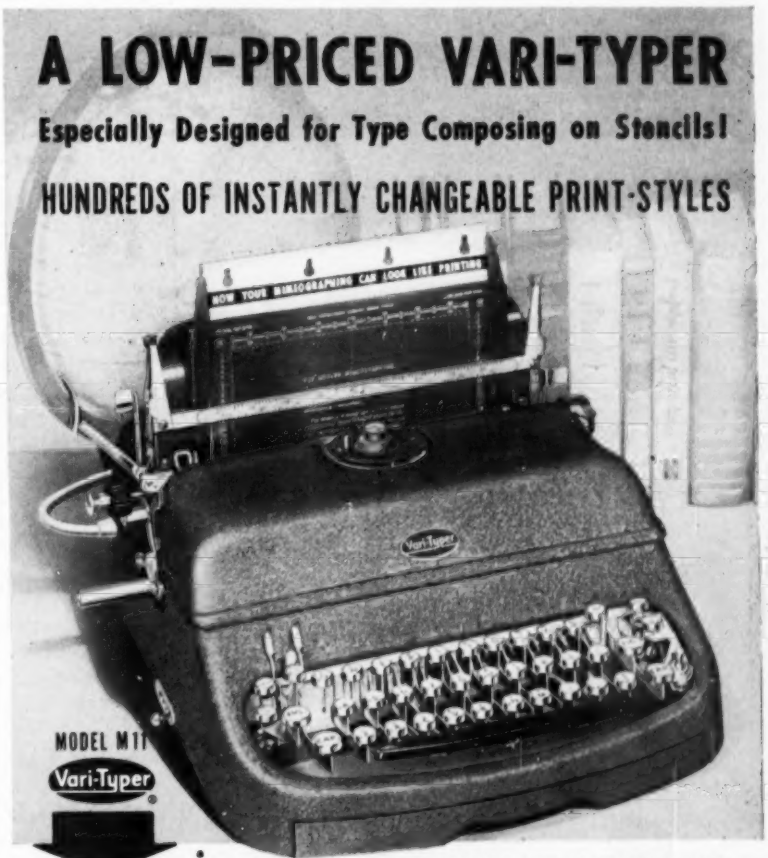
Richard P. McClanahan has joined the Chicago staff of Geyer Publications, succeeding Thomas M. Bulger, who died in May.

Mr. McClanahan is 34 and a graduate of Iowa State University. Following service in the Army, he has been selling space and radio time. During the last three years he has been with the *Implement and Tool Journal* in the Minneapolis territory.

A LOW-PRICED VARI-TYPER

Especially Designed for Type Composing on Stencils!

HUNDREDS OF INSTANTLY CHANGEABLE PRINT-STYLES



MODEL M11

Vari-Typer

BUDGET PLAN
ONLY $48 DOWN.
... Savings will materially lighten the already modest balance of twelve monthly payments.

RALPH C. COXHEAD CORPORATION
720 FRELINGHUYSEN AVE. • NEWARK 5, N. J.

Please send VARI-TYPER Booklet C-12

NAME.....
COMPANY.....
ADDRESS.....
CITY.....ZONE....STATE.....

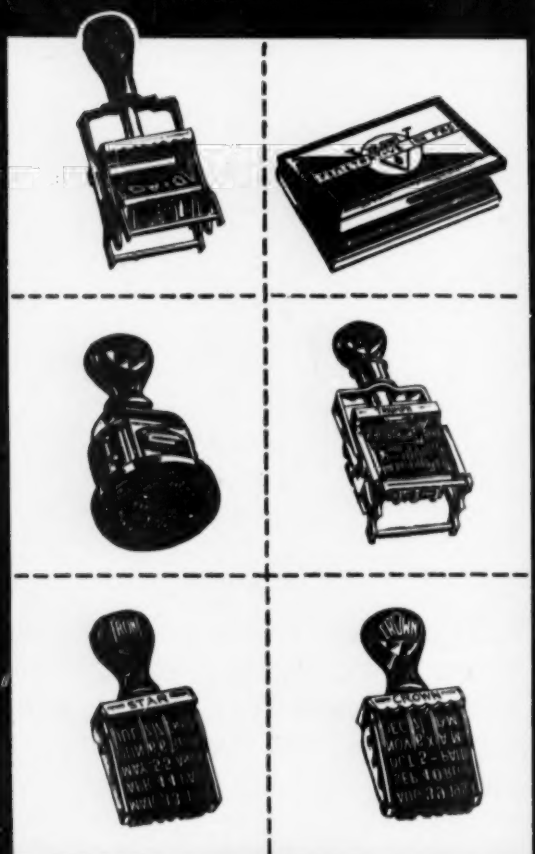
ATTENTION . . . DISTRIBUTORS OF STENCIL DUPLICATORS . . .
Write for details of new distributor plan.

Dating Stamps

Sold around the world!

THE CROWN LINE has been acclaimed by the trade for its EXTRA QUALITY as the FINEST MARKING DEVICES EVER MADE. CROWN products are made and designed to stand up under constant use without fear of breakdown.

For that Extra Quality . . . Economy . . . Efficiency . . . Faster Delivery . . . insist on the best line . . . "THE CROWN LINE!"



R. A. STEWART AND CO., INC.

80 Duane Street • New York 7, New York

Supervision—

(*From page* 17)

7. At the same time, democratic supervision is not treating everyone as similar and their problems as the same. Supervisors should not go to this extreme. In human relations the similarities among people are few and those that exist do not count for much. Supervisors cannot become sensitive to the problems of a group of workers just by trying to find what problems are common to them. The lumping together of apparently similar problems and identifying them as common to the group has prevented individual problems from receiving their correct attention. What is common to workers is usually that they have problems and not that their problems are common. Supervisors can make themselves aware of the problems of a group of workers by seeing the differences between their problems. However, as mentioned above, one must be consciously aware of how treating these different problems affects the group.

Two fundamental requirements of democratic supervision are that differences between workers' problems that are not self-evident are seen by the supervisor and, secondly, that these differences are in some way revealed to the workers. That is to say, the differences are somehow made known to the workers in order that the supervisor is not seen in one instance as playing favorites and in another instance as lumping all of their problems into a common category for equal treatment. Both kinds of conduct are antagonistic to the workers.

8. Democratic supervision is not in opposition or contradiction to the demands of efficiency and cost control. Democratic supervision does not prohibit keeping costs down and efficiency up. However, it does recognize that matters of cost and efficiency are tied in to the manner in which people work together and these factors are basic to costs and efficiency. In this sense, democratic supervision is more employee-centered than production-centered.

In this same sense, cost and efficiency problems are subordinate to human relations by means of being solved through the efforts of the workers. Thus, if a proposal on paper seems very efficient but when brought to the attention of the workers is vehemently protested, the proposal is then seen in the two lights and a proper decision is reached, based upon proper consideration of the feelings of the workers and the advantages of the proposal that might accrue when implemented.

Peter F. Drucker, who writes a great deal on management and supervision, suggests that matters of economics like cost and efficiency should not be valued as objectives but as limitations to what might otherwise be possible if the sky were the limit. A belief is rising that in the long run, harmonious human relations are not subordinate to anything but the perpetuation of them. In this sense, cost and efficiency might be viewed as objectives when they are the basis upon which continued employment and job opportunity depend.

Although this may be debatable, the fact that human relations are primary is not a debatable element of democratic supervision.

Democratic supervision also emphasizes the way a problem and solution are discussed and reached. Democratic

(*To page* 68)

Mutschler **SAMSON**

conference and office tables

SERIES 471

SERIES 222

SERIES 71

SERIES 333

Samson conference tables are designed for practical use, and are built to last. The ageless beauty of their American Walnut and White Oak hardwoods also bespeak enduring quality. Styles range from early Jacobean to Contemporary, and are available up to 16 feet in length. Special sizes, heights and styles may be ordered for custom installations.

A series of smaller Samson tables for the office and reception room also are available.

All Samson tables are made by Mutschler Brothers Company of Nappanee, Indiana, who has been building the Samson line for nearly forty years, and whose woodworking experience goes back to 1893.

SEND FOR CATALOG

Dealers are invited to send for their copy of the beautiful new Samson catalog which shows the complete line, some models in full color. Write to —

MUTSCHLER BROTHERS COMPANY
Dept. 805, Nappanee, Indiana

SMEAD
HAS ONE TOO
With their TWO-PLI-TOP FOLDER

Saves space and money

The top edge and tab of Smead's TWO-PLI-TOP folders are reinforced by turning over and gluing an extra inch of stock. This gives a smooth, rolled non-cutting edge of double strength at the points of greatest wear. Made of rigid, close knit manila fiber. A medium-weight TWO-PLI-TOP FOLDER of 9½-point thickness actually provides 23 points of thickness at the tab— more than twice that of a standard single top heavy-weight 11-point folder.

NOTE THIS CONSTRUCTION!

9½ points of paper folded over and glued— with 4-point thickness of glue gives 23 points of strength at the place of greater wear.

Smead's TWO-PLI-TOP folders, medium heavy-weight 9½-point ⅔ cut tabs (illustrated) cost approximately $9.90 per thousand less than standard single top heavy-weight 11-point folders.

Smead's TWO-PLI-TOP folder with its rounded corners is a better folder than the standard single top because it is double at the point of greatest wear (the tab). Tabs will wear longer and the rolled edge eliminates cuts and scratches of file clerks' fingers.

One thousand 9½-point TWO-PLI-TOP folders will take up 3 inches less space in a standard drawer file than will be taken up by one thousand 11-point standard single top folders because the TWO-PLI-TOP is above correspondence height.

Write us today for a free sample of Smead's TWO-PLI-TOP folder. Always use a system folder—"it permits growth as needed."

THE Smead MANUFACTURING CO.
HASTINGS, MINNESOTA LOGAN, OHIO

FREE

Send us a free sample of Smead's TWO-PLI-TOP FOLDER.
Name _____
Address _____
City _____ Zone ____ State _____

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
FINISHING TIME
TOTAL ELAPSED TIME

Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

COUPON BRINGS FULL INFORMATION
— FILL IN AND MAIL TODAY!

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to: 334

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

Supervision—

(*From page* 66)

supervision is inimical to the procedure whereby the problem and solution are arbitrarily set by the supervisor. Of course, there are some problems and solutions that do not require determination by the workers, but these are not what are referred to in this paper. Herein discussed are problems and solutions that can be discussed by the workers. It is the searching for opportunity to refer problems and solutions to the workers for consideration that significantly sets the democratic type apart from autocratic and laissez-faire types.

9. Democratic supervision does not necessarily require that the formal and informal leader of the workers be one person, namely the supervisor. This is fine if possible, but it is not a requirement. A supervisor may start with a captive audience. That is, his workers may not view him as their natural or indigenous leader. His leadership is more by appointment rather than achievement. Oftentimes supervisors come up against an individual who is an informal leader of the workers. In autocratic supervision his presence would create a challenge to the supervisor and thus promote unfriendly feelings between them. In laissez-faire supervision the informal leader would not be challenged but perhaps encouraged to do some of the leg work of supervision. (He would probably be referred to as a stooge or errand-boy.) Soon another informal leader, however, would come forth to engage the workers now and then in humorous and pleasant associations.

Democratic supervision is dualistic. In one sense it implies guidance and suggestion and in another sense it implies socializing and harmonizing. In the former case, the job is primarily to make people aware of their problems and in the latter case make them forget. Both the guiding type of leadership and the socializing type of leadership are needed. Eventually, however, there will usually arise a worker who somehow has a clever pun or a quick remark or a stirring joke just at the right time that will completely take the spotlight away from the supervisor. This is not unhealthy.

An element of democratic leadership is that one should *promote* informal social leaders among the workers and not oppose them. There is an inevitable tendency even under the best supervisor for informal leaders to spring up. These leaders are a source of frustration to the supervisors when they are not allowed the status that means a lot to them. If denied status, they usually work to cut the ground out from underneath the supervisor. They will get their status somehow. Rather than try to "lick" them or even "join" them, the democratic supervisor develops them along useful lines. There are never too many informal leaders in democratic supervision.

10. Democratic supervision does not stress the result of what happens when workers have ample opportunity to express themselves. The noun "supervision" takes a back seat to the verb "supervising." What this means is that a supervisor who works toward finally having a smoothly running team may be sadly disappointed when he finds that there is no such thing as a finished team or one that needs no more building.

As one supervisor puts it, "People just can't work to-

(*To page* 70)

"AMERICA'S STANDARD OF BUSINESS SEATING"

aluminum chairs

CUTTING COSTS

You can cut your office costs, by increasing your office efficiency. Properly seated office workers are more efficient—and therefore, less costly.

FINE-REST Aluminum chairs will increase productivity, and reduce absenteeism, fatigue, and errors. FINE-REST chairs provide a service that pays for itself. Why not let your dealer demonstrate the FINE-REST cost-saving features?

Write for the name of your nearest FINE-REST dealer.

"America's Standard of Business Seating"

ALUMINUM SEATING *Corporation*
17 S. CHERRY STREET • AKRON 8, OHIO

Distributor AETNA SAFE CO., 46-50 W. 29th ST., N. Y.
METROPOLITAN N. Y. & EXPORT DISTRIBUTOR

NATIONAL SALES SLANTS

DEMAND DOLLAR FOR DOLLAR VALUE

BUY **VUL-COT**®

The National Quality Waste Basket

This suggestion isn't made without sound reason. The VUL-COT line has so much *more* to offer. VUL-COT construction is all-hard vulcanized fibre providing a handsome finish. It's extremely durable, light in weight, easy to clean and handle.

You buy these features when you buy VUL-COT

Color is part of the fibre—it can't chip-off, wear-off, or stain.

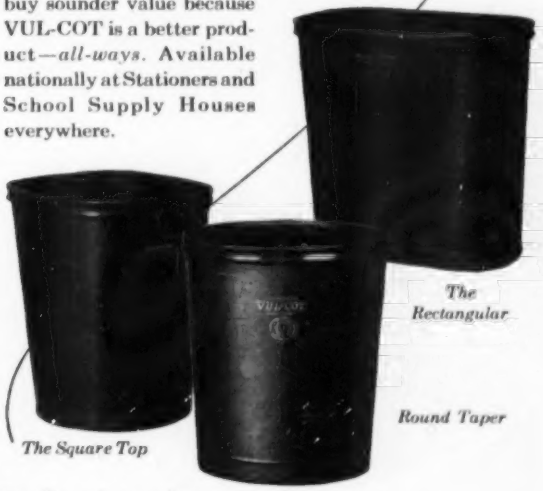
Double rolled top won't break, loosen, or fray. Remains smooth and round for the life of the basket.

Exclusive bonded seam construction adds strength and provides a permanent leak-proof seal.

Available in 5 basic models—in a variety of sizes.

VUL-COTS are guaranteed not to crack—splinter—dent—rust—or corrode.

If you buy waste-baskets —*BUY VUL-COT*. You'll buy sounder value because VUL-COT is a better product—*all-ways*. Available nationally at Stationers and School Supply Houses everywhere.



Write direct for catalog, price sheet. Dept. S-8

NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

PAYCHECK "OUTLOOK" ENVELOPES

Eliminate Time and Expense of Addressing, also Chances for Errors

Paycheck "Outlook" Envelopes are absolutely opaque; essential when wages are paid by check: Nothing shows but the employee's name. This improves personnel relations.

THEN—you'll want to use "Outlook" envelopes for other purposes. All sizes and styles, with your choice of either glassine or cellulose transparency.

Write for samples and prices.

OUTLOOK ENVELOPE COMPANY
Originators of "Outlook" Envelopes. Est. 1902
1986 WASHINGTON BLVD., CHICAGO 7, ILL.

ACCOBIND FOLDERS

ALCO TRADE MARK

MORE and more firms are standardizing on Accobind Folders for all their filing. Ask your stationer to show you the savings and many other advantages of Acco-binding for *your* business.

ACCO PRODUCTS, Inc.
Ogdensburg, N. Y.

Supervision—

(*From page 68*)

gether and be entirely free of friction." Workers always have problems and differences that need attention. A supervisor who leaves work one evening with the idea that he has finally achieved cooperation among the workers also leaves himself wide open for tragedy and disappointment. How many supervisors have returned the next day to find themselves in the middle of a hot argument and feel that they must start all over again?

Man is a home-viator, which means never at the goal, always on the way. This has application to the job of building a harmonious group of workers. In democratic supervision it is the building of the house, for example, that counts most since the house is never to be completed. When the supervisor sees this often-overlooked point, he can visualize how he can be more effective. For certainly if every argument is a challenge to his success as a supervisor, every difference an indication that he lacks ability, every dispute a sign of defeat, the supervisor will be a failure every time he turns around.

However, when he views the process of supervision strictly as a process and not a product that can be finalized in concrete form, the supervisor views agreement and difference in their natural setting and thus proceeds with less self-reflection and criticism. To build on differences and arguments that arise is the challenge of democratic supervision.

In this respect it is utterly unlike the autocratic type that suppresses challenges and differences or the laissez-faire type that ignores them as being only "natural." The foundation of democratic supervision is the creating of more and more opportunity for disagreement and discussion on the part of the workers and supervisors. There is no end to this creating because new problems are always in the making.

11. Lastly, democratic supervision does not recognize as primary and all-inclusive the formal structure, rules, and policies of the organization. Many supervisors have revealed to the author the sad consequences of resorting primarily to formal rules and policies in order to establish proper human relationships. Democratic supervision is related profoundly to the supervisor's informal and personal relationships to the workers which are not explicit in the formal policies and rules of the organization. The supervisor's effectiveness is dependent on how and what relationships he can establish with and among the workers.

For example, the autocratic supervisor recognizes a rule for every deed. Whether he made it or it was written in a manual is not important. The laissez-faire supervisor has no rules. The democratic supervisor works within broad rules of the organization and depends primarily upon informal agreements and understanding established by and on behalf of both workers and supervisor.

In the autocratic type of supervision, authority precedes cooperation and implies "cooperate, or else!" In the laissez-faire type of supervision, authority is completely subordinate to cooperation. In the democratic type of supervision, authority and cooperation are one and the same process. Authority is not viewed as basic to cooperation, nor cooperation basic to authority. They are dependent upon each other.

(*To page 73*)

Simple test demonstrates file-hardness of Bassick caster

Pre-test caster wear before you buy

Now you don't have to wonder how long Bassick casters will stand up on your office furniture.

Get yourself a file and *prove it*. Bassick ball and raceway surfaces are case-hardened in special furnaces to 15N90 Rockwell hardness. They are so hard that the file won't cut them.

That's why Bassick's will last longer, perform better, on office chairs and furniture. Just another good reason why nationally advertised Bassick casters are going on more and more office equipment every day.

Smoother rolling, easier swivelling Bassick "Diamond-Arrow" line includes casters for wood and metal chairs, typewriter stands, etc. With "Baco" rubber tread or "Atlasite" hard composition wheels.

THE BASSICK COMPANY, Bridgeport, 2, Conn. *In Canada:* Belleville, Ont.

Bassick
A DIVISION OF STEWART SW WARNER

MAKING MORE KINDS OF CASTERS... MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP

Time-Saving Utility Eraser Zooms to New-Popularity High!

Here's the newest, most convenient, most economical eraser time-saver in decades. Cylindrical stick eraser encased in attractive transparent plastic holder, is usable down to the last fraction of an inch; Holder can unscrew so eraser-stick can be moved outward. *Won't roll off desks!* Outstanding for clean, accurate erasing!

BRUSH WHISK STYLE FOR TYPISTS

HANDY, POCKET CLIP STYLE FOR GENERAL USE

Companion to pocket fountain pens, for executives, engineers, artists, students.

Red Rubber for erasing pencil writing and carbon copies. Gray rubber for erasing ink writing and typewriting. Refills.

•

ORDER A TRIAL DOZEN JETS TODAY FROM YOUR DEALER!

•

WELDON ROBERTS RUBBER CO.

365 Sixth Avenue
Newark 7, N. J.

World's Foremost Eraser Specialists

Weldon Roberts Erasers
Correct Mistakes in Any Language

Activate Control Systems
with Cellugraf TRANSPARENT SIGNALS for VISIBLE RECORDS
Nu-Vise PROJECTING SIGNALS for VERTICAL RECORDS
Depend on Graffco products to call for the right action at the right time . . . every time. Facts come to life, stand out, flag attention. A variety of colors and shapes to control any classification. Ask your dealer about them.
GEORGE B. GRAFF COMPANY
54 Washburn Ave., Cambridge 40, Mass.
Maptacks for CHARTS and MAPS
Graffco SIGNALS and MAPTACKS
Keep BUSINESS Under Control

GUSSCO
THE HANGING FOLDER WITH ADJUSTABLE METAL TAB
Guide-O-folder
*T. M. Reg.
Your "filing and finding" problems disappear when you use Guide-O-folders in your active files. Not only do you save both time and money but you remove the drudgery from the filing department and make it a pleasant place to work.
You will appreciate the speed and accuracy with which your records are filed and kept instantly available for reference. Your clerks will appreciate the ease and accuracy because all the tugging and pulling of ordinary folders is eliminated. Guide-O-folders just glide back and forth on their steel frames with finger tip ease.
Ask your local stationer or office equipment dealer to show you how Guide-O-folders will solve your filing and finding problems.
GUIDE SYSTEM & SUPPLY CO.
335 Canal Street New York 13, N. Y.

CLASSIFIED ADVERTISING

Rates are 15c a word. Minimum charge $3.00. Payable in advance. Address replies to all Box Number ads c/o OFFICE MANAGEMENT, 212 Fifth Ave., New York 10, N. Y.

For Sale or To Buy Used Equipment

VISIBLE FILING EQUIPMENT, Kardex, Acme, Postindex, etc. All equipment thoroughly rebuilt and guaranteed. Commercial Card System Co., 135 Grand St., New York 13, N. Y.

FOR SALE ADDRESSOGRAPH Model 2000 with feed expirator and lister. Equipment two years old, reasonably priced. Contact Box 6, Wall Street Station, New York 5, New York. Attention Purchasing Department.

DITTO GELATIN PROCESS S-20 Electric 1491. Priced to sell. 1951 model—excellent condition. 2 Metal gelatin roll conditioning cabinets on casters. Operator's chair; other accessories. Bargain. Write U. O. Colson Company, Paris, Illinois.

CALCULATORS AND ADDING MACHINES Wanted, all makes. State make, model, serial number and adding capacity. International Office Appliances Inc., 326 Broadway, New York 7, N. Y.

ADDRESSOGRAPHS, MULTILITHS, VARITYPERS, Mimeographers, Postal Meters, Folding Machines, Calculators, Adding Machines, etc. Wanted. We pay top prices. Write immediately Northway Distributors. 2621 1st Ave., Seattle, Wash.

Positions Wanted

ARCHITECT-DESIGNER, specialized in commercial interiors, experienced in office layouts, wishes connection or partnership with manufacturer or distributor, will invest. O.M. 163

MOUNT HOLYOKE early June graduate seeks office position in Boston or New York. Has majored in English Composition and has had experience in writing for school publications. Would appreciate position where this special qualifications may be of service in the production of reports, house bulletins and publications and similar work. O. M. 165.

ADVERTISING-PUBLICITY MANAGER AVAILABLE. News writing, layouts, editorial. Solid acquaintance in management, office equipment and allied fields. Would relocate. O.M. 166

SYSTEMS ANALYST 20 YEARS successful Cost Reduction in Systems, Procedures, Work Simplification and Wage Incentives. Average earnings $8,000. B.A. and M.A. degrees. O.M. 167

Business Opportunities

PROFITABLE FRANCHISES AVAILABLE—Own your own business. Operate a temporary help service with our help. We operate coast to coast—29 offices. Modest funds required for operating capital. Franchises available in cities under 300,000 population. Be a part of nation's largest temporary help service. Step into profitable business of your own by writing Miss Lewis at 330 W. Kilbourn Ave., Milwaukee 3, Wis.

FOR SALE—Excellent for professional, medical or insurance company. Modern one-story, ten room office building, 170 foot frontage on Colorado Boulevard, fifteen minutes from downtown Los Angeles. Architecturally designed, excellent mahogany woodwork and built-ins. Inter-office communication and music system, forced air heating, insulated. Kitchen, lounge, rest rooms, shower, paved parking lot. Brokers invited. O.M. 164.

Miscellaneous

NEED TEMPORARY OFFICE HELP? Call Manpower, Inc. if you need temporary typists, stenos, bookkeepers, comptometer operators. Use our employees for 4 hours—a day or two a week—a month or longer. We are not an employment agency. Low hourly rates. We operate in Chicago, Boston, Cincinnati, Cleveland, Detroit, Milwaukee, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco with other affiliated branches coast to coast. Call Manpower, Inc., for qualified temporary office help.

Supervision—

(*From page* 70)

For example, the supervisor must have a little authority to get started, but at the same time the workers must have a little cooperation in their hearts before the little authority of the supervisor is useful. Many supervisors have overemphasized their authority and stifled cooperation on the part of the worker. Others have thrown their authority to the winds and relied upon sheer cooperation. Both cases fail to bring desirable results either to the workers or the supervisor.

A writer on the problem of authority suggests that authority is derived from the consent of the workers. Some supervisors find it very difficult to understand that authority is not derived from authority or display of it. Authority is something that arises because certain functions need to be performed and the supervisor has value in performing these necessary functions. In other words, the supervisor should be oriented toward developing a need for supervision and should not take this need for granted. This is what one writer calls developing the "law of the situation" and not that of the individual.

To rely upon the organization chart or the consent and backing of the supervisor's superiors is to acknowledge that the supervisor's personal and informal relations with his workers are in an unhealthy state. When this is the case, there is scant chance that formal authority, rules, and policies can repair broken fences. This has been tried far too often with little success. The solution is through the office supervisor's relationships with his workers. This is the challenge offered by democratic supervision.

Case of the month—

(*From page* 26)

The entire group of paper goes to the production control section where it is held until the job is released for manufacturing. When an operation on a job is completed, the employee's pay number, quantity produced, week number and the basis on which he is to be paid, are punched into the voucher cards. The voucher card is processed through punched card equipment to prepare mechanically paychecks, cost data and labor distribution.

This is the package of benefits which mechanization brings. Speed—mechanization keeps the production control function running smoothly in high gear. Accuracy—mechanization substitutes machine accuracy for human errors. Savings—mechanization cuts costs and effects real savings. Moral—mechanization boosts morale and morale boosts efficiency.

Job analysis—

(*From page* 14)

tion using Work Sampling was very small. The company got management information which it could not have afforded to get by any other means. And best of all, it had made the study itself, using part of the time of an observer with little formal training in statistics or mathematics. We believe that any company can profit from using the same techniques.

A Time-Saving "DUX" On Every Desk

Precision Pencil Sharpeners

speedily sharpens:
Fat pencils, slim pencils, soft leads, hard leads. Repoints crayons and chalks.

Available at all leading Office Supply & Stationery Stores.

Exclusive Distributor
Fred Baumgarten
675 Cooledge Ave.
Atlanta 6, Georgia

FOR ALL TRAVELERS

by train, bus, plane or automobile, whether for pleasure, on private business or government service,

BEACH'S
"Common Sense"
Expense Books and Sheets

are best for keeping track of expense. There is a Personal Expense Book, too, for records at home.

Beach Publishing Co.
7338 Woodward Ave., Detroit 2, Mich.

OCTOBER 1954 ISSUE!

CLOSING DATE SEPTEMBER 1st

We urge you to please send to our New York office your complete advertising copy instructions and cuts to reach us by September 1st to insure insertion in the OCTOBER issue.

OFFICE MANAGEMENT
212 Fifth Ave. New York 10, N. Y.

THE STURGIS POSTURE CHAIR COMPANY
General Sales Offices, 154 East Erie St., Chicago 11, Illinois

We'd like a copy of your illustrated folder on chairs with fiber glass bases.

Name .....

Firm Name .....

Address .....

City ..... State .....

"IN OUR OFFICE

we've hundreds of uses for...

AVERY Kum Kleen LABELS

THEY'RE *self-adhesive and removable"*

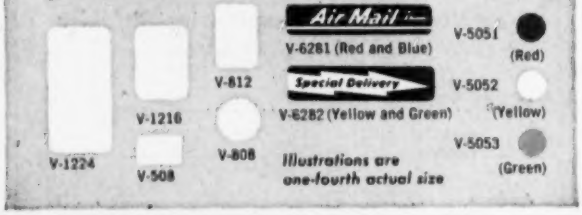
For labeling file folders, catalog sheets and charts—used for identification, visual index markers, map stickers—for air mail and special delivery stickers—address and address changes and hundreds of other uses. There's no limit to the convenience and utility of Avery Labels.

And every office labeling job can be faster, cleaner and neater with Avery Kum-Kleen. There's no messy gluing or licking, because Avery Labels are *self-adhesive*. They stick instantly at the touch of a finger—and stay stuck—yet they're easily removed when necessary!

dealers! *Be sure your stocks of Avery Labels are complete for all office needs. Free sales aids—displays, mats and literature are available. See your Avery salesman or write for samples today!*

type, stamp or write on them ...you'll save time and money!

Self-adhesive Avery Labels come in your choice of 25 popular shapes and sizes.



AVERY ADHESIVE LABEL CORP., Resale Div. 151

117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 So. California Ave., Monrovia, Cal. • Offices in Other Principal Cities

ADVERTISER'S INDEX

A

Ace Fastener Corp 64
Agency—The Vanden Co., Inc.

Acco Products, Inc 70
Agency—La Porte & Austin, Inc.

All-Steel Equipment Inc. 2nd Cover
Agency—Hollingsworth and Collins

Aluminum Seating Corp 69

American Cancer Society 63

American Dictating Machine Co., Inc 45

American Telephone & Telegraph Co 3
Agency—N. W. Ayer & Son, Inc.

Arnot-Jamestown Div. Aetna Steel Products 9
Agency—Alfred J. Silberstein, Bert Goldsmith, Inc.

Avery Adhesive Label Corp 74
Agency—Martin R. Klitten Co., Inc.

B

Baltimore Salesbook Co 6
Agency—Vansant, Dugdale & Co., Inc.

Bassick Co., The 71
Agency—James Thomas Chirurg Co., Inc.

Baumgarten, Fred 73

Beach Publishing Co 73

C

Calculagraph Co 68
Agency—George Homer Martin Assoc.

Coxhead Corp., Ralph C 65
Agency—United Advertising Agency

D

Dictaphone Corp 47
Agency—Young & Rubicam, Inc.

E

Eastern Corp 60
Agency—Sutherland-Abbott, Adv.

Eastman Kodak Co 63
Agency—J. Walter Thompson Co.

Elliott Addressing Machine Co 64
Agency—H. B. Humphrey, Alley & Richards, Inc.

Esterbrook Pen Co., The 52
Agency—The Aitkin-Kynett Co.

G

General Binding Corp 62
Agency—Robertson, Buckley & Gotsch, Inc.

General Fireproofing Co., The 7
Agency—The Griswold-Eshleman Co.

Globe Wernicke Co., The 50
Agency—Kammann-Mahan, Inc.

Graff Co., George B 72
Agency—Eddy-Rucker-Nichels Co., The

Guide System & Supply Co 72

H

Haloid Co., The 54
Agency—Hutchins Advertising Co., Inc.

Hammermill Paper Co 56
Agency—Batten, Barton, Durstine & Osborn, Inc.

I

Imperial Desk Co 64
Agency—Keller-Crescent Co.

Indiana Desk Co 63
Agency—Keller-Crescent Co.

L

Leopold Co 53
Agency—N. A. Winter Adv. Agency

Linen Supply Association of America and National Cotton Council 57
Agency—George H. Hartman Co.

M

Macey-Fowler, Inc 4
Agency—Givaudan Advertising, Inc.

Marchant Calculating Machine Co 39
Agency—Doremus & Co.

Mutschler Brothers Co 67
Agency—Juhl Advertising Agency

N

National Business Show Co 55
Agency—Osgood & Hazen

National Vulcanized Fibre Co 69
Agency—Harris D. McKinney

Nekoosa-Edwards Paper Co. 3rd Cover
Agency—Cramer-Krasselt Co., The

Neptune Storage, Inc 51
Agency—Hayes-Ender Brown, Inc.

O

Office Management 8, 32

Olivetti Corp 41
Agency—Geyer Advertising, Inc.

Outlook Envelope Co 70
Agency—Arthur C. Barnett, Adv.

P

Plymouth Rubber Co., Inc 58
Agency—Hirshon-Garfield, Inc.

R

Remington Rand, Inc 49
Agency—Lefford Adv. Agency, Inc.

Reynolds & Reynolds Co., The 59
Agency—Weber, Geiger & Kalat, Inc.

Roberts Rubber Co., Weldon 71
Agency—La Porte & Austin, Inc.

S

Smead Mfg. Co., Inc 67

Stewart & Co. Inc., R. A 66
Agency—Harry Belfor Agency

Sturgis Posture Chair Co 73
Agency—Blaco Adv. Agency

U

Underwood Corp ..... 4th Cover
Agency—Marschalk & Pratt Co.

V

Victor Safe & Equipment Co., Inc., The 61
Agency—Lefford Adv. Agency, Inc.

W

Wellington Sears 10
Agency—Ellington & Co., Inc.

the watermark to look for

Nekoosa

Nekoosa Papers are serving American business in many ways . . . for letterheads, envelopes, forms and office equipment. It will pay you to specify Nekoosa Papers on your next printing order. Your printer has them—or you can obtain them in standard sizes, in boxes and ream packages, from your office stationer.

NEKOOSA BOND

NEKOOSA MIMEO

NEKOOSA DUPLICATOR

NEKOOSA LEDGER

NEKOOSA MANIFOLD

NEKOOSA-EDWARDS PAPER COMPANY • PORT EDWARDS, WISCONSIN

school, in your own office. Get in touch *today* with your local Underwood Representative, listed in the Classified Directory.

And watch your boss smile with satisfaction when he sees the accurate, crisp, clear work you can do now . . . and in the

Classified Directory) to tell you about this delightful new Underwood 150 and let you

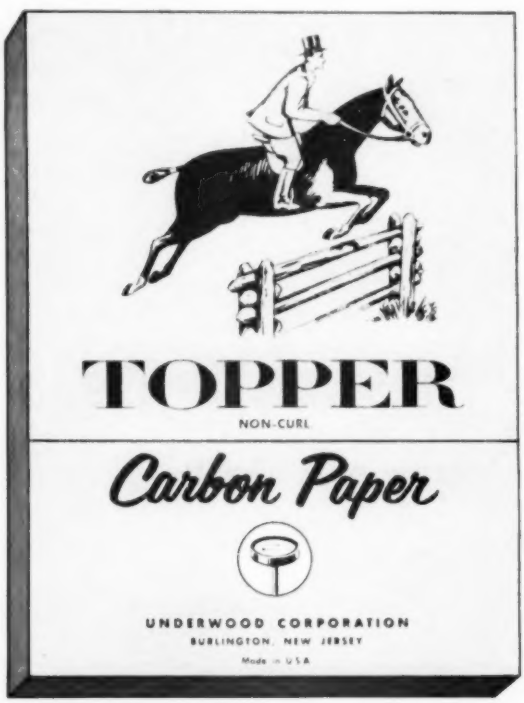
Biggest News in Carbon Paper!

Topper is Tops for Performance!

UNDERWOOD CORPORATION after extensive market research and field testing . . . offers you an entirely new TOPPER CARBON PAPER that has *6* entirely new features!

TOPPER offers you this superior quality carbon paper *—at no increase in price!*

This *high* quality carbon paper gives excellent legibility . . . is *extra* durable. Clean to use, instant setting. Quick drying. Non-tack. Non-curl. Non-smear!



You will find every one of these 6 new TOPPER CARBON PAPER features an important aid in making and keeping better copies:

1. Five degrees of inkings in the three correspondence weights of paper.
2. Light, medium and standard weights, i.e., 4½ pound Light Weight, 6½ pound Medium Weight and 8½ pound Standard Weight.
3. Hinged type box for ease in removing carbon paper.
4. New surface treated TOPPER BOX, minimizing scuffing and soiling.
5. A real plastic back minimizing curling, slippage and adding to its type blow resistance . . . further improving its durability.
6. The use of a series of new inks provides uniform consistency . . . clean and easy to erase.

Try this new sensation in accurate, smooth, easy typing in your own office, on your own work. Get in touch today with your local Underwood Corporation Supply Representative, listed in the Classified Directory.

Specify this new TOPPER BRAND CARBON PAPER *for quality work!*

Order it today . . . for immediate delivery!

Underwood Corporation

Supply Division
One Park Avenue
New York 16, N. Y.